

Better Equipment for Southern Mills

SOUTHERN TEXTILE BULLETIN

VOLUME 26

CHARLOTTE, N. C., THURSDAY, JULY 17, 1924

NUMBER 20



This remarkable and timely treatise is **FREE** to plant executives

CONSTRUCTIVE FACTS ON GROUP vs. INDIVIDUAL DRIVES

Compiled by Robert W. Drake from actual experience, and stated in a way that will assist plant owners in solving this important problem

Note--- The Engineering and Service Department of the Chicago Belting Company frequently publish and distribute authoritative books on some phase of the subject of power transmission by belting. This is done in addition to the regular work of the Department in assisting belt users with their individual belt problems, making plant surveys of belting, etc. We are very proud to be able to include in our publications this fine book of Mr. Drake's.

Two more new books

A practical book of instructions



Instructions for Making Leather Belts Endless

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Pre-tested Leather Belting— what it is—what it means to the Buyer of belting—and Who makes it.

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Both of these books are free to any textile mill superintendent or executive

MANUFACTURERS building new plants have been faced with a hard problem in that they have been called on to choose between group drives with belts, and individual motors. This situation was made more difficult in that data and actual cost experiences have been lacking for both group drives and individual motors.

Individual drives have been advocated quite strongly and somewhat indiscriminately and their advantages have been carefully listed. On the other hand, the disadvantages of individual drives have not been presented.

Group drives also have been shy on reliable data—disinterested non-competitive data—and the two systems could not be compared and accurately appraised.

ROBERT W. DRAKE, Electrical Engineer of the McCormick Works of the International Harvester Company, Chicago, has compiled these data. His new book tells when to use group and individual drives together with practical operating requirements and supporting data developed from long experience in mill and factory work.

Mr. Drake's book is invaluable to all mill men—especially as Mr. Drake is not allied with either one side or the other. He has no irons in the fire—no axe to grind. He is interested only in the most efficient production methods and their operation and costs.

Drake answers these questions relative to group and individual drives—

1. Which has the lower first cost?
2. Which has the lower maintenance cost?
3. Which has the more frequent breakdowns?
4. With which is standardization of parts and motor styles and speeds the more practicable?
5. Which carries a practical line of spares?
6. How does AC as compared with DC affect your selection of group and individual motor drives?
7. Which has the higher power factor?
8. Which has the lower unit cost for power?
9. What is the efficiency of each?
10. How does an increase in speed and load affect power factor and efficiency?
11. How can a motor of 1/4 to 1/5 the total horsepower of the motors required for individual drives be amply adequate with group drives?
12. How can you secure 8 to 16 speeds with a belt drive?
13. What are the comparative costs—of generating equipment and operation?
14. Is your individual motor apt to "roast out" when an uncommonly heavy job is handled?

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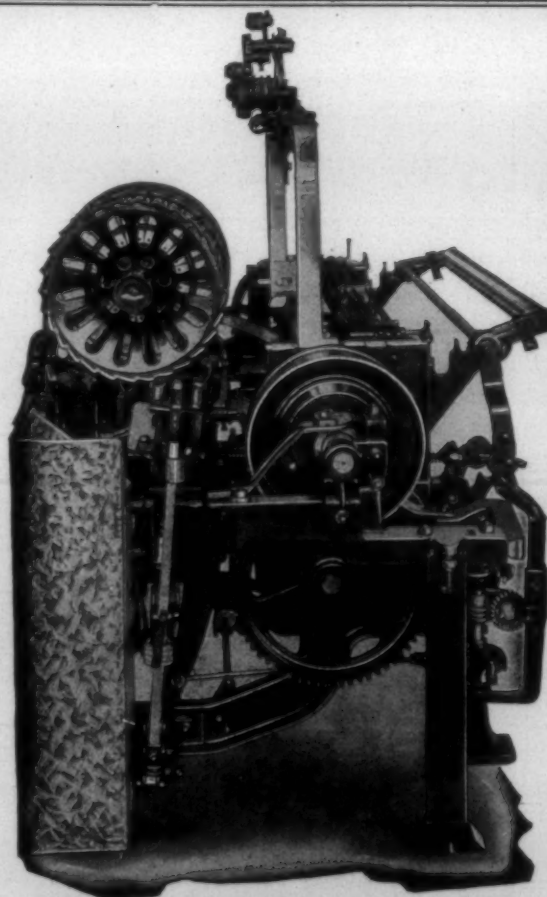
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OIL STAINS

An Advertisement by Chas. E. Carpenter

"An ounce of prevention is worth a pound of cure."

DO you know, I cannot ascertain who the guy was who made that most wise crack. The way most of the authorities have it is, "Prevention is better than cure." But prevention is so very much better than cure that in one respect at least I believe in the 16 to 1 ratio.

And so it is with oil stains.

You have heard all about stainless oils and perhaps I was the buddy who told you, for I have written and said a mouthful about stainless oils and yet you know and I know that there is no such a thing any more than there is such an animal as an honest man.

There are lots of men who think they are honest and others who want to be honest and more who try to be honest, but in one respect or another they all fail in some way, and so we find ourselves the poor, weak sinners that the Lord described us.

So long as water, one of the most stainless of all liquids, is on a fabric, it shows a stain; when it dries it merely evaporates and, therefore, is not on the fabric and does not stain, and this is true of naphtha, gasoline and some

of the other volatile liquids. But you cannot lubricate your machinery with either water or the volatile liquids on account of the fire hazard.

Therefore, a STAINLESS OIL merely means one that may be removed from the fabric by the usual methods, without leaving a stain, but it depends largely whether or not the so-called stainless oil is filled with metal pigment ground from the bearings, as to whether or not it is really stainless.

HOUGHTON'S ABSORBED OILS do not stain because they do not get on the fabrics, for the very simple reason that they do not drip. "Oh!" But I hear you say, "An oil is an oil and an oil must drip." And my answer to that is, "What is, is and must be, and they don't drip."

You may order a trial lot subject to your own terms of approval and settle all argument by having facts before you. As HOUGHTON'S ABSORBED OILS are not cure-alls there needs to be a different variety for each distinctive type of machinery, so please specify the kind of machine you desire to use the oil on in sending in your trial order, or better still, write us requesting a representative to call and let him advise the variety.

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We dye yarn wound on Franklin Springs. The yarn is shipped to you on these same springs without rewinding. The Franklin Packages are simply fitted with wooden skewers and they are all ready for the V creel for warping. "Let's go!"

Compare the different manufacturing steps in the Franklin Process and warp dyeing:—

FRANKLIN PROCESS

1. Bobbins to Franklin Pkg's
2. Dyeing
3. Franklin Pkg's to beams

WARP DYEING

1. Bobbins to spools
2. Spools to chain warp
3. Dyeing
4. Chain warp to beams

Franklin Dyeing then not only eliminates one entire operation, but also replaces wasteful chain warp beaming with an inexpensive creel warping operation. If you use the Franklin Process you can throw out your beaming machines.

Quality? — The Franklin Process dyes in a closed kier under pressure in a highly concentrated dye bath, less than a gallon of liquor to a pound of yarn. In this way maximum penetration is obtained, producing exceptionally solid, even and brilliant colors.

You can prove this to your own satisfaction by sending for our sample card of Franklin Vat Colors. A request on your business stationery will bring it.



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Delivery? — Anywhere from two weeks to a few days, depending on a number of variable conditions and whether you furnish the yarn or we furnish it. In emergencies we can give you special attention.

Price? — Our actual dyeing charges are no more than those of any other job dyer, sometimes less. But when you figure in the savings which it makes possible in your manufacturing, the Franklin Process is by far the most economical dyeing service you can employ.

Do you not think the Franklin Process is at least worthy of your careful investigation? Why not write today and get the complete story? "Let's go!"

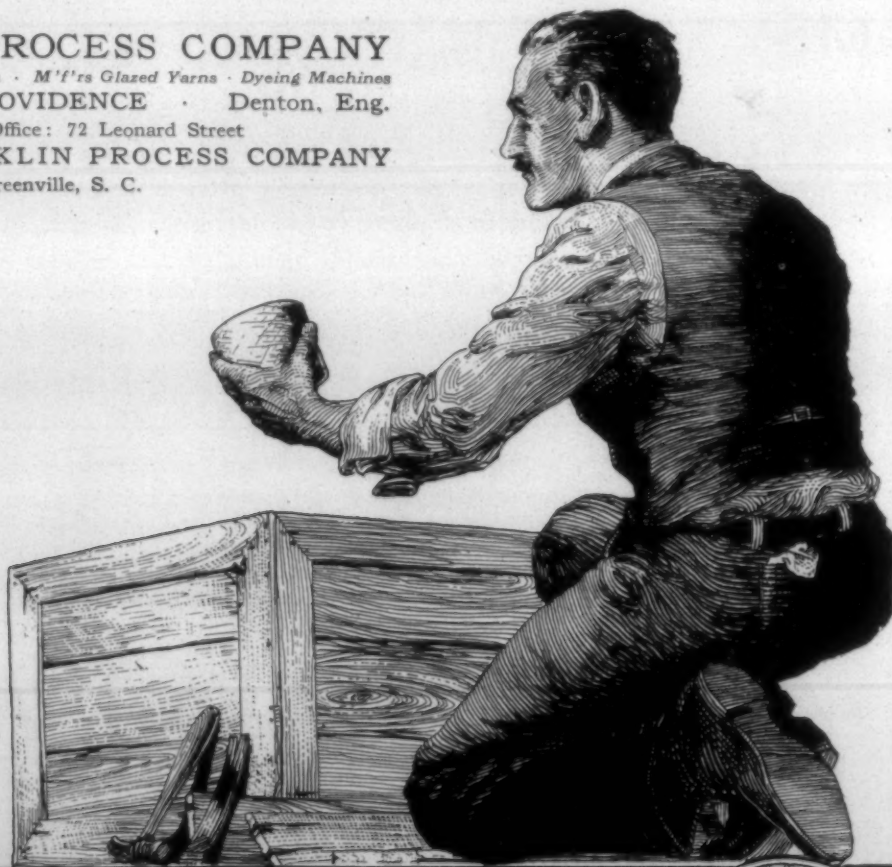
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The use of liquid caustic soda in tank cars eliminates all this economic waste and materially lowers the operating costs of large consumers. Our savings in production costs are reflected in a lower price per hundred pounds on our caustic soda in liquid form.

Mathieson Liquid Caustic Soda is available in any strength solution (up to 50% sodium Hydroxide) that best meets the consumer's requirements. The "Eagle Thistle" product is the purest caustic obtainable.

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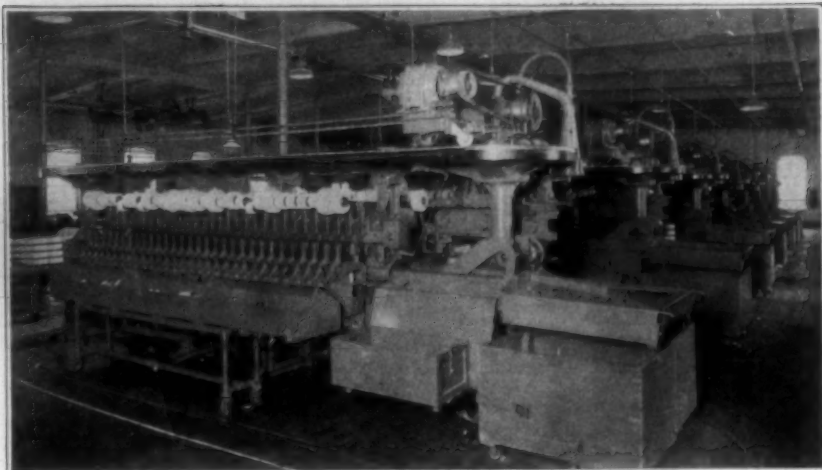
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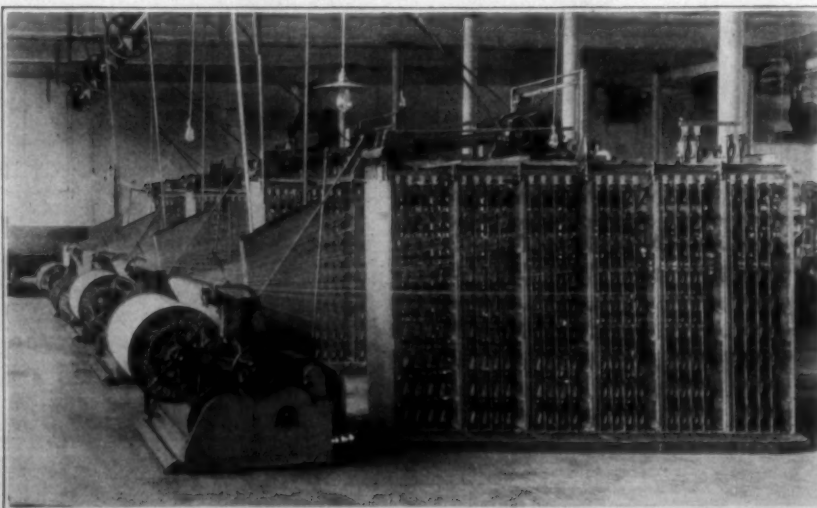
AUTOMATIC SPOOLING

Better Equipment, because it produces higher quality warps with half as many employees.

There are many other reasons why our machines are better.

"EVERY KNOT A WEAVERS KNOT"

HIGH SPEED WARPING

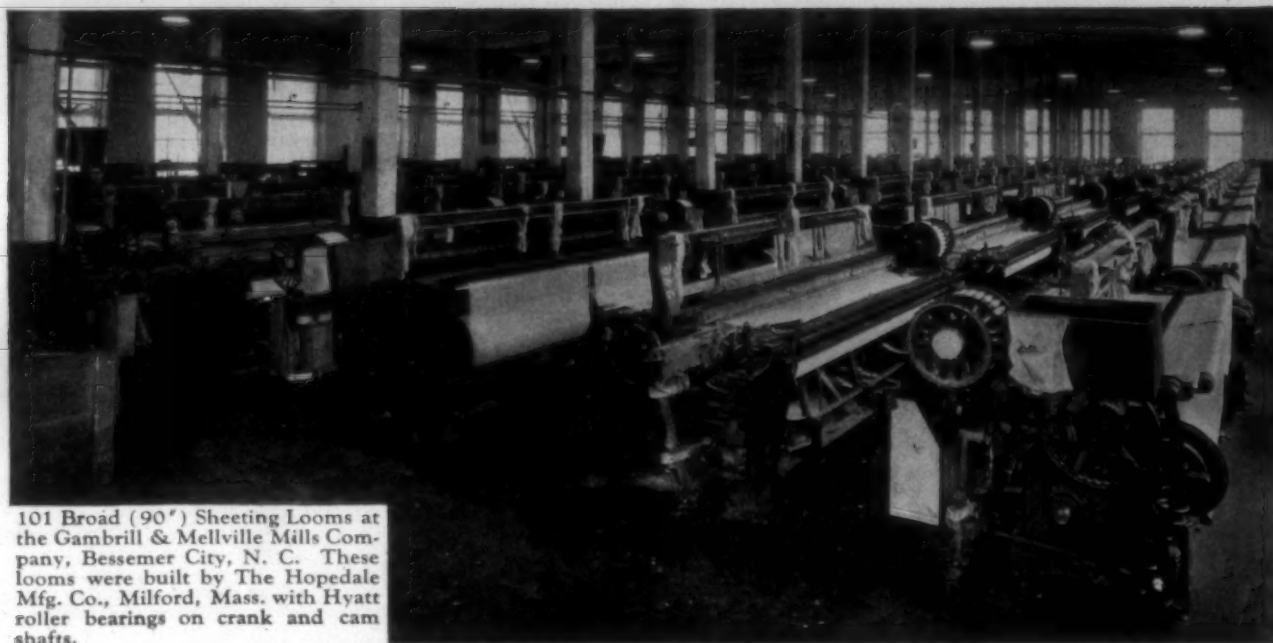


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Rockford, Illinois

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101 Broad (90") Sheetting Looms at the Gambrill & Mellville Mills Company, Bessemer City, N. C. These looms were built by The Hopedale Mfg. Co., Milford, Mass. with Hyatt roller bearings on crank and cam shafts.

More Broad Looms Hyatt Bearing Equipped

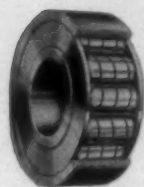
ANOTHER link in the steadily lengthening chain of Hyatt equipped looms is this installation in the Gambrill and Mellville Mills.

When modernizing your own mill consider the following advantages to be had by installing looms equipped with Hyatt roller bearings.

Better cloth
Increased production
Decreased oil spoilage
Smoother operation
Easy turning by hand

Lubrication saving
Power saving
Less crankshaft breakage
Absence of bearing wear
Higher quality looms

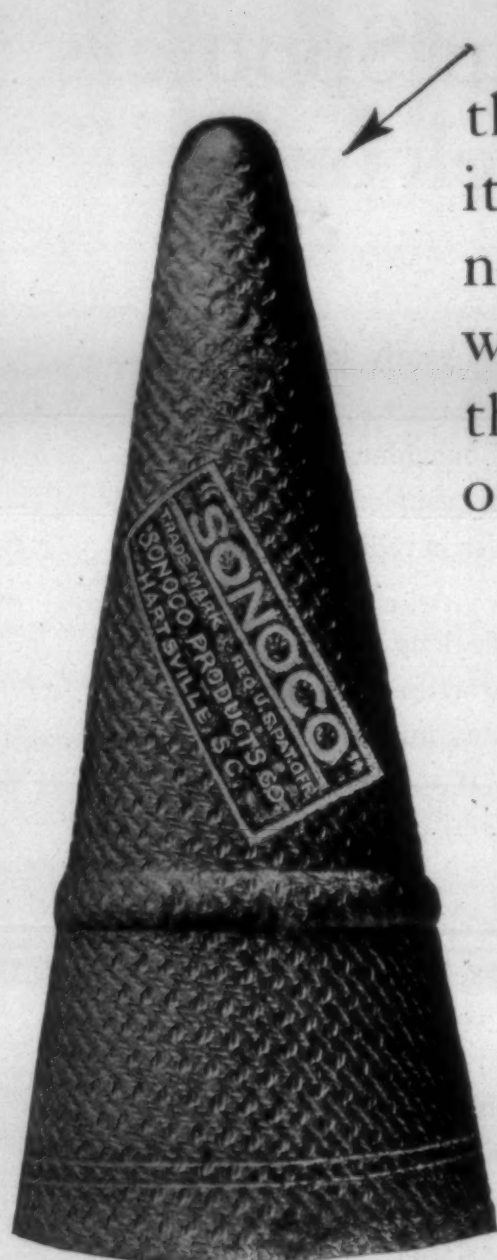
A new illustrated bulletin covering the application of Hyatt bearings to looms, as well as to all other classes of textile machinery, is now ready for distribution. Write for a copy.



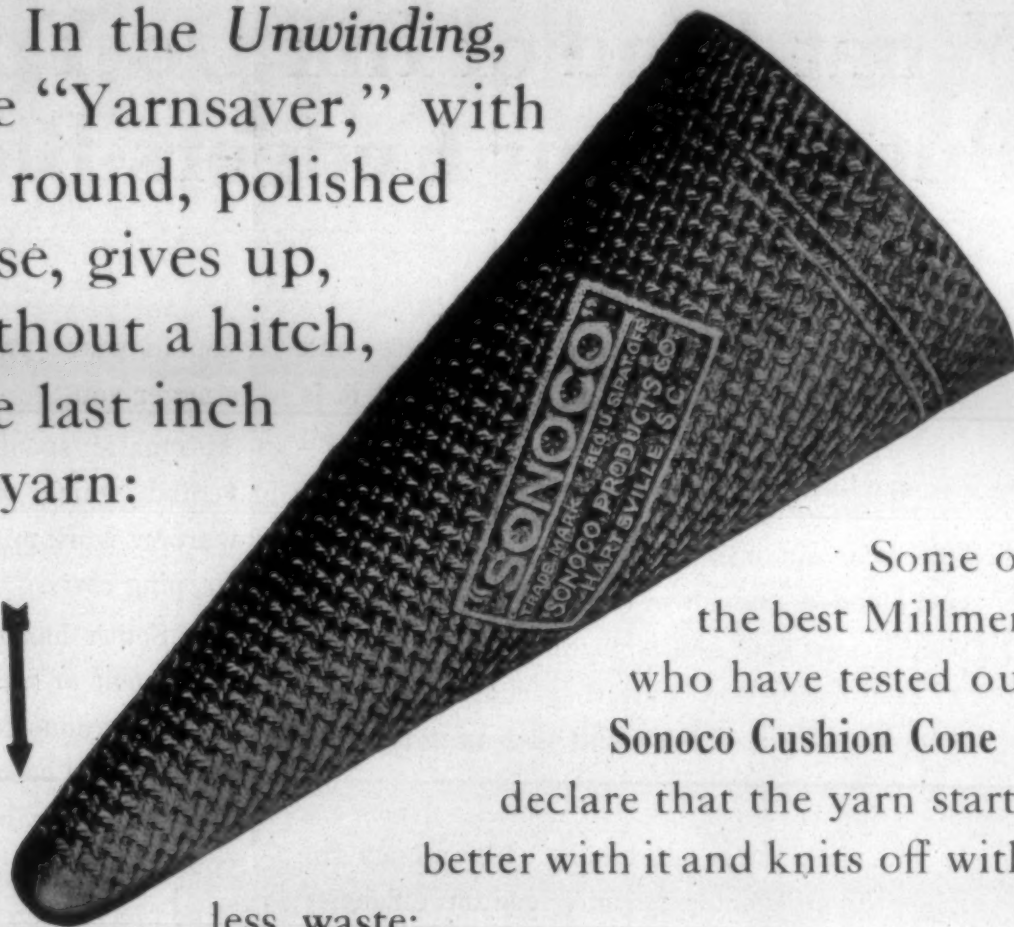
HYATT ROLLER BEARING COMPANY

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HYATT ROLLER BEARINGS FOR TEXTILE MACHINERY



In the *Unwinding*,
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its round, polished
nose, gives up,
without a hitch,
the last inch
of yarn:



Some of
the best Millmen
who have tested ou
Sonoco Cushion Cone
declare that the yarn starts
better with it and knits off with
less waste:

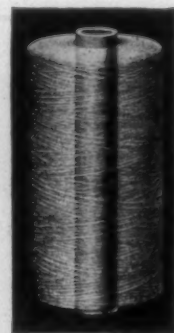
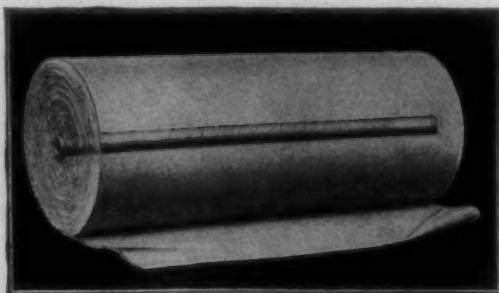
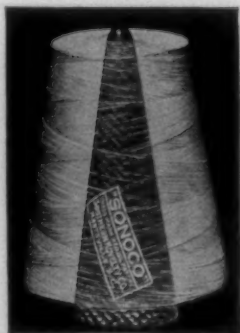
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We can imprint with Brand, or Name of Mill, if required



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What Kind of Ink Do Your Spoolers Put On Your Ledgers-Black or Red?

When the mill is humming and the clatter and chatter of the machinery is at top pitch it is easy to drop into the pleasant thought that all the machinery is **making money**.

But in many mills—all too many of them—a cold blooded analysis of each piece of machinery would show that some machines make a profit on their cost every hour they run, while other machines—just as busy and just as noisy—are secret loss makers.

If you are paying out money after money for labor to run spoolers of only medium efficiency when less labor would run types of spoolers and warpers which do better work at less cost and with less waste you are cultivating profit leaks which the auditor can explain only with red ink balances.

You'd worry greatly over one big lump loss—yet your old-fashioned spoolers may be costing

you in waste yarn a yearly total that would stagger you.

Automatic spooling machines have been invented which when coupled to high speed warpers work miracles in reducing spooling and warping costs.

The South has made long strides in the improvement of mill practices and conditions but it is hazardous for any mill to pause now. As we have said before "If you are not going ahead probably your competitor is going ahead of you."

If you have been considering a change to better spooling and warping machines **DO IT NOW**. The manufacturers need business to bridge the Summer slump—they can make early deliveries. Ask your machinery jobber or manufacturer for live information on modernized spooling and warping machinery. Prepare to keep in the lead **NOW**.

*Help Keep The South Leading In Big Scale
Production Of Quality Textiles*

Better Equipment Campaign

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NUMBER 20

Advantages of Automatic Spoolers and High Speed Warpers

THE successful cotton mill of today with its high wages and keen competition must avail itself of every opportunity to cut costs and increase the efficiency of its processes and at the same time maintain or, if possible, improve the quality of its product. No better way of accomplishing these results may be found than by the installation of labor-saving machinery, as witness the strides made by the automatic loom and the warp tying machine in the last twenty years.

Previous to the war wages were so low, especially in the spooling and warping department, that the savings to be obtained from the use of labor-saving machinery were not of sufficient importance to attract much attention. In these times of high wages, however, the opportunity to make a material reduction in costs in this rather neglected department is attracting considerable attention among progressive and up-to-date mill men.

In view of the great industrial expansion, not only in the textile industries but in other lines of industries throughout the South, it seems highly improbable that wages in Southern cotton mills will be reduced materially. On the other hand New England, with her still higher wages and short hours, will be forced to adopt every possible labor-saving device in order to reduce her manufacturing cost and maintain her position in the industry. This will in turn react upon the Southern mill. Many far-sighted mill men recognize these facts and are preparing for the future by placing their mills in the most advantageous position possible by the installation of Barber-Colman automatic spoolers and high speed warpers, as well as modern and up-to-date machinery in their other departments.

Spooling and warping is an intermediate process between the production of yarn and the manufacture of this yarn into various classes of goods. At the very best it adds nothing to the quality of the yarn, except possibly by the removal of a few imperfections. The principal purpose of the process then is the putting of the yarn in a more convenient form to use, and if not carefully done may seriously injure the yarn by weakening it so that it will not weave or knit as well and the resultant fabric will be of poorer quality. It is recognized that

By B. A. Peterson, Textile Engineer, Barber-Colman Company.

the strength and elasticity of the yarn as it comes from the spinning cannot be improved by winding it on these or other machines. Therefore, every effort during the design and construction of these machines has been directed toward keeping the yarn tensions low, and in consequence yarn wound by these machines is of better quality than that wound by the old process. As the process of spooling and warping is of no benefit to the yarn it should be performed as cheaply and as efficiently as possible and with the least damage, putting it in the best condition for the use of the weaver and the knitter. The Barber-Colman machines have been designed and developed, having these points in view at all times.

These machines have been designed to run at high speeds and perform mechanically much of the manual labor formerly required, thus reducing the number of employees to one-half of the number

usually engaged in this department. This results in a direct labor saving of approximately one-half the cost of spooling and warping. The automatic spooler ordinarily runs at a speed of twelve hundred (1,200) yards per minute, varying somewhat according to the amount of yarn on the bobbins, and one spooler girl will do the work usually done by three girls on ordinary spoolers or winders. Our high speed warper runs at a speed of five hundred (500) yards per minute and will do the work of six ordinary warpers. One warper will handle the product of one two-girl spooler.

In spite of the fact that the winding is done at high speed the tension is at all times extremely low and uniform, both at the spooler and at the warper. This naturally results in less yarn breakage and consequently fewer knots are required. The uniformly low tension at the warper produces beams with very few broken ends, beams in which

no thread is stretched more than its fellows, thus greatly reducing the number of laps at the slashers and producing loom beams with few or no crossed ends, each and every thread wound under the same strain, a condition ideal for good weaving. Yarn wound on spools and beams under high tension suffers from loss of elasticity. It will not stand as much stretch at the loom as yarn wound under low tension. Uniform tension in winding makes it unlikely that any thread will be strained more than the others, while low tension preserves the elasticity of the yarn and leaves it with more strength to stand the load; both important factors in reducing the number of broken threads at the loom, and less stoppage of the looms means greater production from the same looms with the same labor.

As the knots at the automatic spooler are all tied mechanically the human element is eliminated and all the knots are good uniform weaver's knots without spooler kinks. It is well known, of course, that the weaver's knot is the best both for

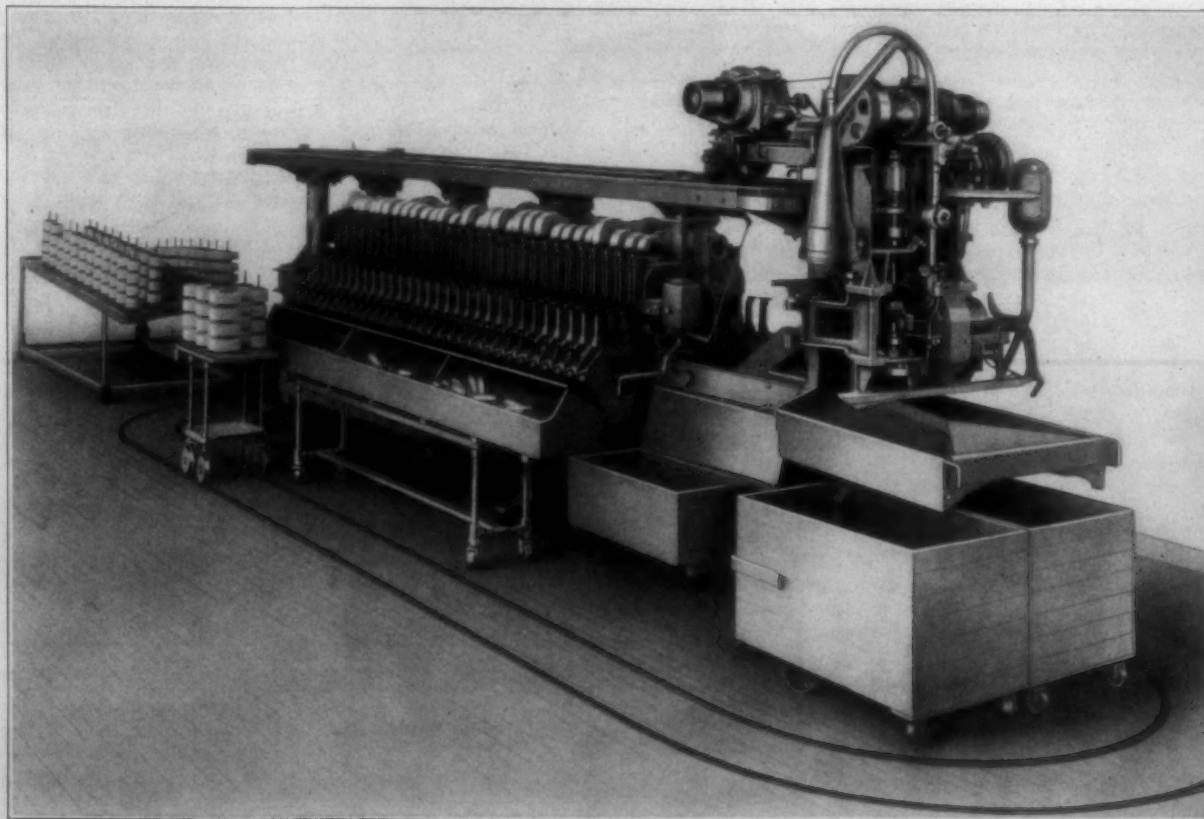


Fig. 1—Sixty-Spindle Automatic Spooler

weaving and knitting, and has long been looked upon as the ideal knot. The difficulties in getting all weavers' knots tied by hand, however, have been so great that except in mills making yarn for the knitting trade no attempt has been made to force the spooler girls to tie this knot, but with our automatic spooler "Every Knot is a Weaver's Knot." A large percentage of stoppage in the weave room is caused by spooler kinks and bad knots, and the elimination of these faults will go a long way toward making perfect running warps.

Thorough tests covering long periods of time made in the weave rooms of several well-known mills have proved that yarn spooled and warped on Barber-Colman machines weaves with less breakage and with a higher percentage of production than yarn spooled and warped in the ordinary way.

Throughout these tests great care has been taken to keep the conditions the same on both sides of the tests. The warps used were made simultaneously with ordinary machinery and Barber-Colman machinery, identical yarn being used in both cases and the treatment before and after the warps were made being the same. The number of looms was kept as near the same on both sides as possible, each weaver having approximately one-half of his looms running on Barber-Colman warps and the other half on ordinary warps. When a warp ran out it was usually replaced by one of the opposite kind so that any differences in loom characteristics would appear on both sides. In addition to the regular weaver an observer was employed on each set of looms (except in Test A3, his duty being to record every stop of every loom in his set and classify the cause on a form provided for the purpose. The looms were equipped with pick counters (except in Test A) and daily readings taken, and from these readings the increase in production was figured.

Test A.

This test was made on 23s yarn and extended over a period of 82 weeks, 18,595 loom days, which is equivalent to approximately 38 looms on each side running the entire time. During this test a total of 1,485 beams (approximately one-half on each side) were woven. The decrease in loom stops was 33.7 per cent in favor of the warps made on Barber-Colman machines, and the increase in production was 1.17 per cent for 36 weeks of the test, no record of production being taken during the other portion. Production was determined by weighing the cloth.

	Stops.
Ordinary warps	116,502
Barber-Colman warps	77,241
Decrease	33.7%
Average Stops Per Loom Per Day.	
Ordinary warps	6.265
Barber-Colman warps	4.154

Test B.

This test, on 28½s yarn, covered a period of 259 weeks, or a total of 33,645 loom days. This is equivalent to approximately 22 looms on each

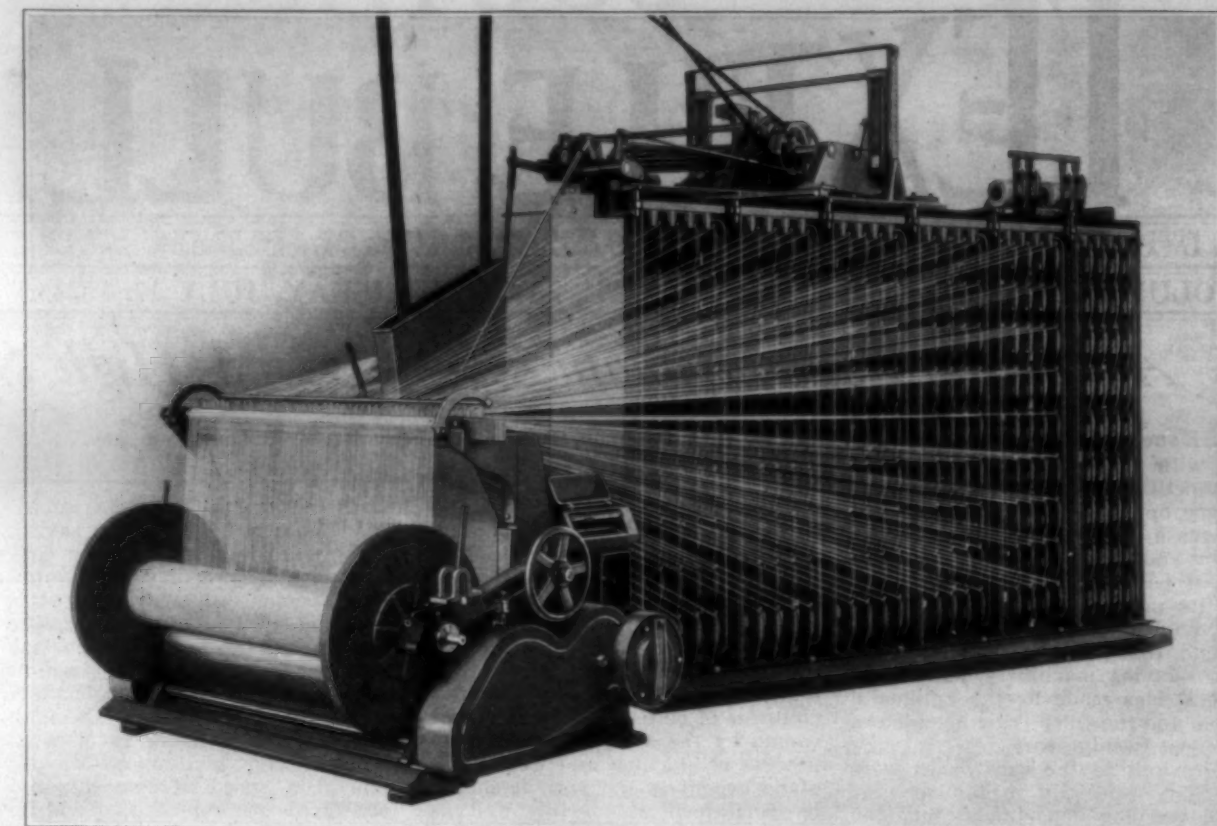


Fig. 2—High Speed Warper

side running the whole time. The average decrease in loom stoppage was 22.82 per cent and the increase in production was 1.15 per cent in favor of warps made on Barber-Colman machines. Production was determined by pick counters.

	Stops.
Ordinary warps	424,836
Barber-Colman warps	327,901
Decrease	22.82%
Average Stops Per Loom Per Day.	
Ordinary warps	12.627
Barber-Colman warps	9.746

Test C.

This test was also run on 28½s yarn, but at still another mill. It ran for 128 weeks, or 16,972 loom days, which is equivalent to 22 looms on each side running the entire time. The result of the test showed a decrease in loom stops of 22.33 per cent and an increase in production of 1.27 per cent.

	Stops.
Ordinary warps	110,960
Barber-Colman warps	82,851
Decrease	25.33%
Average Stops Per Loom Per Day.	
Ordinary warps	6.538
Barber-Colman Warps	4.882

The total running time of all three of these tests was 469 weeks, or a little over nine years, and the average decrease in loom stops over this whole period was 25.44 per cent.

Weave room observations taken during Test C show that about 40 per cent of the weaver's labor is required for repairing warp breakages. Therefore, a decrease in stops of approximately 25 per cent equals a saving of one-tenth of the weaver's labor. In other words, if the weaver only runs the same number of looms as formerly, then his labor will be decreased in the ratio of 10 to 9, or if his labor is kept the same as formerly, then the number of looms he can take care of will be increased in the ratio of 9 to 10. A gain will be made which may take any one of three forms; either decreased labor for the weaver, or increased wages for the weaver, or decreased weaving costs for the mill. Which one of these forms it will be, or whether it will be a combination of them, is a question to be decided by the mill management, but at any rate it appears the gain will be there in one form or

another, and may be expressed in figures as being one-tenth of the total weavers' wages.

In the mill in which Test C was made, having a capacity of 28,000 pounds of warp yarn a week, the normal production of cloth (60 per cent warp) for one year (50 weeks) would be 2,333,333 pounds. The increase in production was shown to be 1.27 per cent in favor of Barber-Colman warps, making an increased cloth production of 30,233 pounds without any addition to the fixed cost in the weave room.

While the indirect advantages of the saving in weavers' wages and general weave room expense, as well as the profit on the increased production, are not so readily determined, nevertheless they exist and in some cases may be of even greater value to the mill than the direct advantages.

In order to reduce the amount of damaged and soiled yarn, an efficient method is provided for handling the yarn packages between the spooler and the warper. This also results in a reduction in the time required to creel the warpers.

Owing to the high speed of these machines fewer spooler spindles and warpers are required to handle a given production, thus greatly reducing the number of yarn packages necessary, resulting in a reduction in the amount of dead yarn or yarn in process from one-quarter to one-half the amount usually required. This reduction of yarn in inventory is a capital saving and should not be lost sight of.

As the amount of machinery required is greatly reduced, considerable floor space is released. This often amounts to one-half the usual amount required and can be used



Fig. 3
Ordinary Round Knot

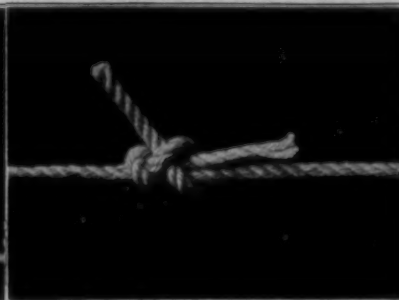


Fig. 4
Weaver's Knot

for other purposes or in the case of a new mill need not be built, resulting in a further capital saving of no mean importance.

Only half as many employees are required to handle the same amount of yarn by the new process as by the old. This results in a decreased cost per pound and releases labor which may be used to advantage in the spinning or weaving departments. This saving in the amount of skilled help required is a definite advantage to any mill, and is particularly valuable to the mill maintaining its own village. It is a well-known fact that the standard of living conditions is constantly improving and more and better houses are being required, so that the reduction in the amount of help required will tend to relieve this housing shortage. In the case of a new mill fewer houses will have to be built, which in itself results in a considerable reduction in the initial investment.

In a Southern mill whose spooling and warping machinery is fairly modern and in good condition the advantages obtained by the installation of Barber-Colman spoolers and warpers briefly consist of

A saving of one-half of the hands employed.

A saving in mill village expense.

A saving of one-half the spooling and warping cost.

A saving of one-quarter to one-half the yarn in process.

A saving of one-half the floor space.

A saving of one-tenth the weavers' wages or its equivalent.

A saving of weave room expense.

An increase in weave room production.

The combination of these savings shows a return on the investment involved sufficient to amply justify the scrapping of the old equipment and the purchase of Barber-Colman machinery.

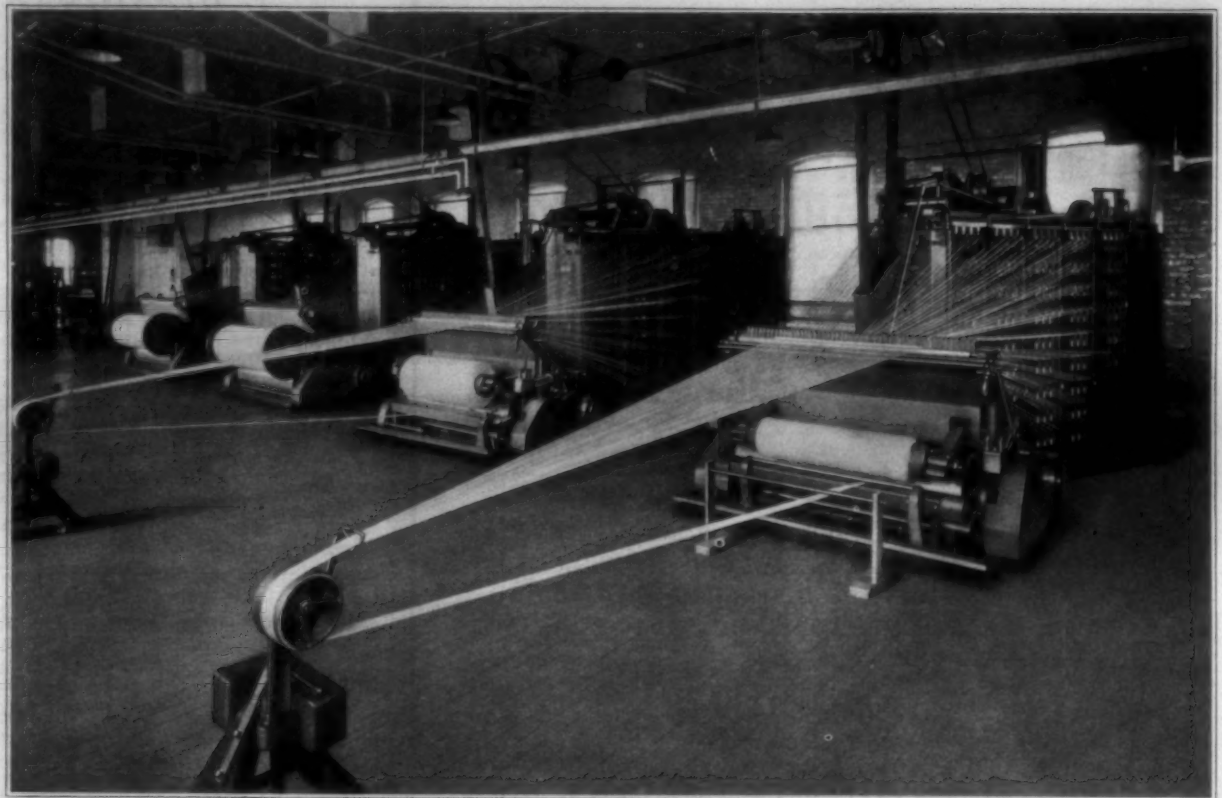


Fig. 5—Installation of High Speed Beam Warpers and Ball Warpers

In the case of a new mill, however, or an old mill whose spooling and warping equipment is nearly worn out and is under the necessity of adding to its mill village as is often the case, the advantages become even greater as the investment in ordinary machinery, additional yarn in process, additional floor space, and additional houses is greater than would be required to purchase Barber-Colman equipment. That is to say in addition to the savings enumerated above, the investment would be less than if ordi-

nary machinery were purchased.

These benefits are so definite and so real that they cannot be ignored by any mill man who desires to give his mill every possible advantage during the period of keen competition which seems to be ahead of the textile industry.

German Novelty Silk Cloth Popular.

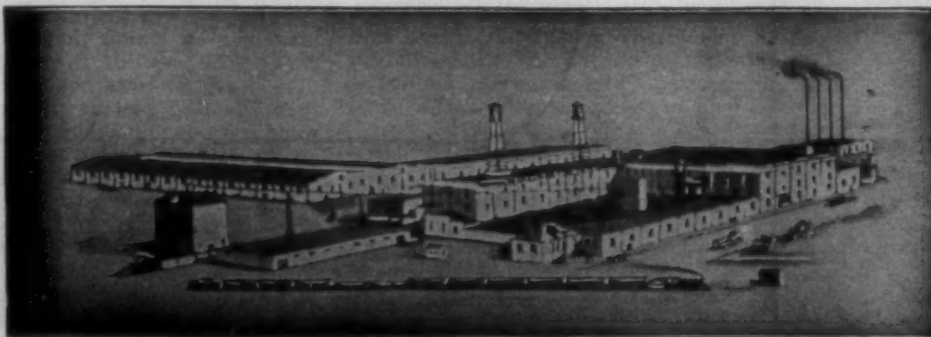
Apache cloth, a silk batik fabric which has recently appeared, is proving very popular on the German market. Manufacturers of this

novelty have so many orders on hand that they are able to accept no more for the current season.

May Exports of Cotton Knit Goods

Washington, D. C.—Domestic exports of cotton duck, including unbleached, bleached and colored duck, during the month of May, had a total value of \$489,229, according to figures made public by the Department of Commerce.

VICTOR MILL STARCH — The Weaver's Friend



It boils thin, penetrates the warps and carries the weight into cloth. It means good running work, satisfied help and one hundred per cent production.

We are in a position now to offer prompt shipments.

THE KEEVER STARCH COMPANY

COLUMBUS, OHIO

DANIEL H. WALLACE, Southern Agent, Greenville, S. C.

C. B. ILER, Greenville, S. C.

L. J. CASTILE, Charlotte, N. C.

Fifty years from now —how will that plant of yours look then?

We know of a manufacturer who put up a two-story factory less than two miles from our Boston Office. It was a splendid building—a model of manufacturing efficiency, well built and of just the right type of construction.

That was five years ago. In the meantime his business grew normally, and he needed room to expand. But, now that he wants to add another story, he finds that the foundation of that splendid building will not carry the extra weight.

In contrast, is a mill we ourselves designed and built some fifteen years ago. It was planned with due allowance for future growth. A few years later, when more room was needed, we raised the roof and added another story. We are now engaged in raising the roof to add still another story. The foundation of that building was built with foresight.

Not infrequently a mill owner finds his mill has passed its usefulness in the short space of five years. Fifty years should not be a long time in the life of any well-constructed mill planned with foresight.

If you are considering a new mill or the enlargement of your present mill, we suggest that you get in touch with us. Ask our engineers to show you how your mill should look fifty years from now.

We will send you on request a copy of "Building with Foresight," an illustrated booklet of Lockwood-Greene work.



LOCKWOOD, GREENE & CO. ENGINEERS

EXECUTIVE OFFICES, 24 Federal Street, BOSTON

BOSTON	ATLANTA	CHICAGO	NEW YORK
DETROIT	CLEVELAND	CHARLOTTE	SPARTANBURG

Lockwood, Greene & Co. of Canada, Limited, Montreal

Compagnie Lockwood Greene, Paris, France

Vulcanized Fibre Spools

By a Representative of the Lestershire Spool and Manufacturing Co.

MORE than twenty years ago the silk industry first adapted Vulcanized Fibre to spools after thoroughly investigating all kinds of material with the desire to improve on wooden spools. That industry, possibly more than any other branch of the textile industry, requires spools made from a substance which will not present any possibility of catching or breaking their fine strands of silk. They have used vulcanized fibre successfully ever since, and although very hard, it wears smooth rather than rough and never frays nor splinters. It is almost impossible to break it and vulcanized fibre heads, when securely attached to wooden barrels, so that vibration and excessive spindle wear is eliminated, makes the ideal textile spool.

The Lestershire Spool and Manufacturing Company, finding the great saving by using such spools in silk mills, submitted spools with vulcanized fibre heads to both wool and cotton mills, and after using same for a considerable length of time in both woolen and cotton mills, it was found that the vulcanized fibre head spools would give these mills the same percentage in saving as they gave the silk mills. The large spools for the woolen and cotton trade, however, had to be manufactured with a different construction as to the application of the heads to the barrel on account of the size of the spool, the cotton spool being much larger, therefore holding a large quantity of material which caused a greater pressure between the two heads.

After much experimenting and investigating the Lestershire Spool and Manufacturing Company effected a method of applying the heads securely to the barrels, which eliminated any possibility of the heads coming off the barrel. This process of fastening is now covered by three distinct patents.

It is a well-known fact that the barrel of the spool never wears out. The heads get all the wear and when the heads are made from an indestructible material, which is true of vulcanized fibre, the spool likewise is indestructible.

In eliminating the defective heads of the spool, there are three things to take into consideration. First, is the loss of yarn on account of broken heads. If any mill will take into consideration the number of wooden spools that are broken per annum and the amount of waste that comes from a broken head spool, which cannot be reclaimed and also take into consideration that should the yarn be reclaimed from a broken head spool, add the additional cost of reclaiming same and they will readily see that this saving alone justifies a change in spools, which will eliminate this defect.

The heads of the Lestershire vulcanized fibre head spools will not fray nor splinter, eliminating another source of waste and increasing production. If any mill running

wooden or metal shield spools will investigate their creeling operation, they will in practically every case find one or more wooden or metal shield spool on their creel that either has a sharp flange or a splinter on the inside of the head, which causes the breaking or cutting of the yarn many times during the unloading or emptying of this spool on the creel. The use of vulcanized fibre head spools eliminate this defect and it has been proven a number of times in a number of mills that a creel of Lestershire vulcanized fibre head spools with the same number of yards per spool and spools running at the same speed would empty themselves from 45 minutes to one hour in advance of the wooden spools.

This item alone, if checked, will show increased production and also eliminate the number of knots in the yarn which would otherwise be there should the yarn be broken by splinters or rough edges on the wooden spool.

Lestershire vulcanized fibre head spools are manufactured in such a way that makes them absolutely true, which decreases the vibration and spindle wear. Also, due to the fact that the heads will not splinter or become rough but instead the longer they run the smoother they will wear, eliminating the injury to employees hands by getting splinters from the wooden head spools or getting their hands cut with the wooden spools equipped with a tin shield. This item also, if figured per annum and a correct check is kept on same, will prove the vulcanized fibre head spools a great saver.

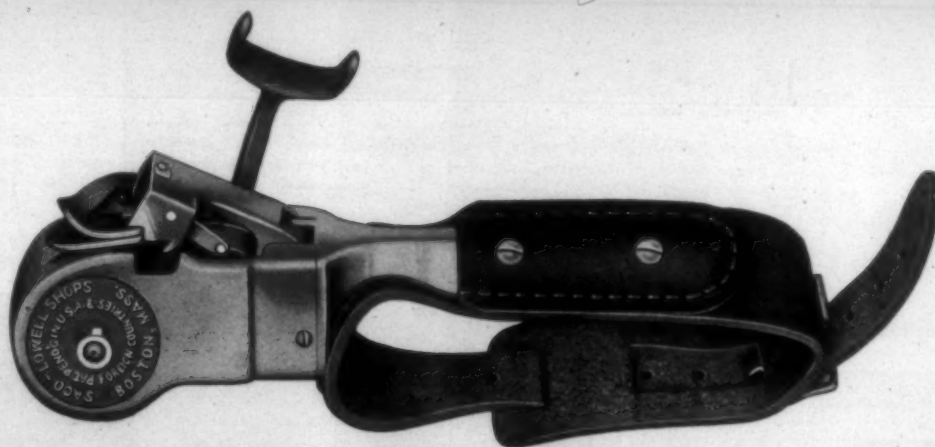
Should any mill have in service or have at any time had in service fibre spools which would fray, get rough, absorb moisture and swell, they should not get them confused with vulcanized fibre head spools. The Lestershire vulcanized fibre head spools will not fray, chip or splinter and will last as long as the machines on which they are used.

The first cost of the vulcanized fibre head spools, of course, is more than the first cost of the ordinary wooden or metal shield spools, but if any mill will check its orders for replacements of the wooden or metal shield spools, they will find that in a majority of cases the average life of a wooden or metal shield spool is about seven years. You will find, however, in making this investigation that in many cases the wooden spool is destroyed in a short time after it is put in operation, especially if it is dropped full of yarn, the head striking the floor, which will either break the head in many instances or cause it to splinter. Compare this with the life of a Lestershire vulcanized fibre head spool for a period of, say, twenty years, taking into consideration the increased production which you will receive by using vulcanized fibre head spools and also the amount of

(Continued on Page 41)

SACO - LOWELL

LARGEST MANUFACTURERS OF TEXTILE MACHINERY IN AMERICA



Saco-Lowell Weaver's Knot Tyer ($\frac{3}{4}$ Actual Size)

WEAVER'S KNOTS

IMPROVE QUALITY OF GOODS
INCREASE PRODUCTION ON LOOM OR KNITTING MACHINE
REDUCE COST IN WEAVING OR KNITTING
FEWER GOODS MADE SECONDS

The Saco-Lowell Weaver's Knot Tyer is strong and rugged, compact and light, weighing only $5\frac{1}{2}$ ounces. It is simple and positive in operation, tying a perfect weaver's knot. An essential instrument for quality goods.

Our representative will be glad to demonstrate the knot tyer upon request

SACO-LOWELL SHOPS

1824

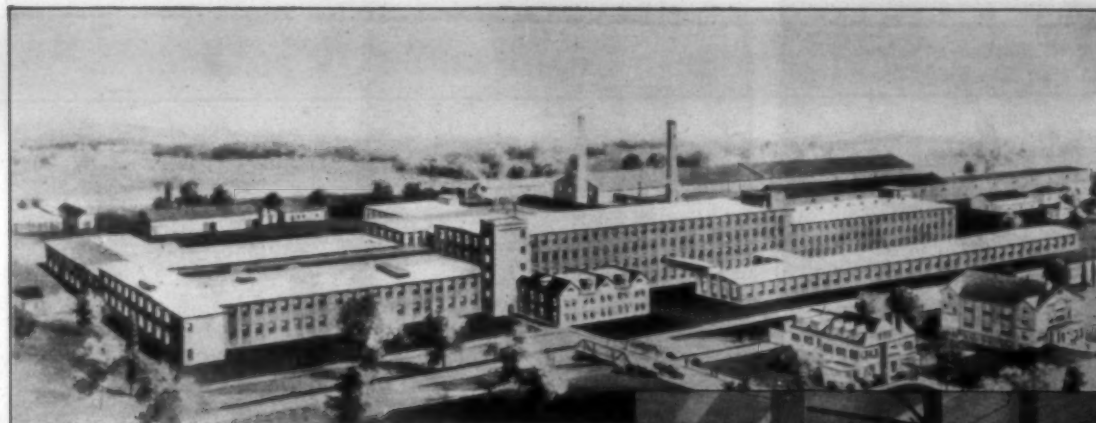
1924

No. 1 Federal St.
BOSTON, MASS.

Sales Offices
1220 Mint St.
CHARLOTTE, N. C.

Masonic Building
GREENVILLE, S. C.

The Utica Willowvale Bleaching Company uses



Plant of the Utica Willowvale Bleaching Company, Chadwicks, N. Y.



Part of the Butterworth Machinery used in the plant of the Utica Willowvale Bleaching Company, to give the fine finish damask.



BUTTERWORTH

Butterworth Machines Exclusively to finish the fine products of several damask mills

From a letter

"A part of the work done at our plant is the bleaching, mercerizing and finishing of table damask. We presume that we finish more damask than any other plant in the country, handling the entire product of several damask mills and we receive many gratifying comments on the finish we produce. This work is done entirely on Butterworth equipment and we think that this is highly complimentary to Butterworth Machinery."

When a concern the size and importance of the Utica Willowvale Bleaching Company places this unqualified endorsement on Butterworth Finishing Machinery, there is nothing that we can add except that we are pleased that Butterworth Machinery has performed so well.

H. W. BUTTERWORTH & SONS CO.

Established 1820

PHILADELPHIA, PA.

Canadian Representative
Hamilton, Ontario, Can.
W. J. Westaway Co.

Providence Office
Turks Head Building

Greenville, S. C. Office
Woodside Bldg.



*Where the damask is made
up into table cloths, napkins,
and so forth, after having
been finished on Butter-
worth Machinery.*

Finishing MACHINERY

Advantages of Better Mill Equipment

Articles Submitted in Prize Competition On This Subject.

Number Eighteen

I desire to submit the following experiences and observations to be used in your contest under the title of "The Advantages of Better Equipment."

Recently we installed five sections of English cleaning trunk in tandem with our old vertical opener and a new vertical opener with adjustable grid bars. We ran a test on a mixing of average middling cotton, and found that the old opener with perforated metal screen took out .58 per cent. The new one with grid bars removed 1.19 per cent, in spite of the fact it got the cotton after passing through the old machine. The cleaning trunk took out .65 per cent after the cotton had been through both openers. This improvement in cleaning in the opener room made it possible to reduce speed of all shafting in picker room 20 per cent, and to reduce total beats per inch 20 per cent. This not only showed a considerable power saving (not imaginary but as shown on the meter on switchboard), but improved breaking strength $7\frac{1}{2}$ per cent. There was also wonderful improvement in the running of the

work, particularly in the spinning room. We are now using cotton a full grade lower than we did a year ago. We get as good breaking strength, and the work is running fully as well as when we were using the better grade of cotton. At the prevailing difference between middling and strict low middling we are saving 1 cent per pound on first cost of cotton. Even after cleaning there is easily three-quarter cent per pound net saving to the mill.

A picker room equipped today should have many improvements over the ones built ten or fifteen years ago. These refinements give cleaner and more even laps both as to total weights and as regards yard for yard variations.

We have obtained much better results after adopting the positive drive for aprons on intermediates and finishers. Ball bearings on aprons and eveners give more even laps. Ball bearings on beaters and fans reduce power consumption and give more accurate setting on beaters, since there is less wear. The swinging cones give more uniform tension on eveners belts, and consequently more even laps. We have been able to make a very no-

ticeable improvement in the appearance of intermediate laps by installing Kirshner beaters on the intermediates in place of the regular two-blade beater. The laps were smoother and cleaner with less white cotton in the motes.

Other improvements not usually found on the older pickers are: More convenient methods for adjusting evener motion, adjustable grid bars, and improved logger heads.

A mill with an ample supply of new cards certainly has a tremendous advantage over one with an inadequate number of old ones. Some of the advantages of the former are: Closer and more accurate settings, which could not be had on the old ones due to danger of facing clothing, caused by lost motion. The mill with plenty of cards can use a lighter lap and run doffers slower, both of which give much better running and cleaner work.

The advantages of a modern vacuum card stripping system are numerous. There is much less dust to breathe, to collect on the web, and on the machines. In addition to saving labor cost, the stripping is so much easier to do, and more

pleasant that it is found practical to strip the cards more frequently, which enables the cards to do their work better.

Many of the older mills do not have enough drawing frames, and consequently must run their drawing so fast as to injure the stock and make uneven work. We found that by adding ten deliveries of drawing we could reduce our front roll speed from 400 to 275 and still keep up. This gave better running work and reduced repair jobs fully 50 per cent. We also found that the shoulders on steel rolls had worn down until the flutes were "bottoming," naturally after putting in new front steel rolls both top and bottom the work was much improved. The holes in trumpets on both cards and drawing had worn until there were various sizes, which produced sliver of various sizes also. These and a great many others are the handicaps that the mill with old equipment are laboring under.

The new slubbers, intermediates and speeders have many refinements that assist in making better roving with fewer tangled bobbins. The

(Continued on Page 39)

H. & B. AMERICAN MACHINE CO.

Pawtucket, R. I.

Builders of Complete Equipments of

Cotton Opening and Spinning Machinery

Consisting of

HOPPER BALE OPENERS — CRIGHTON OPENERS — EXHAUST OPENERS
BUCKLEY OPENERS — ROVING WASTE OPENERS
SELF FEEDING OPENERS — FEEDERS — COTTON CONVEYING SYSTEMS
INTERMEDIATE and FINISHER LAPPERS
REVOLVING FLAT CARDS — DRAWING FRAMES (With Mechanical or Electric Stop Motion)

SLUBBING — INTERMEDIATE and ROVING FRAMES
SPINNING FRAMES and TWISTERS (Band or Tape Driven)
SPINDLES — FLYERS — RINGS — FLUTED ROLLS

Southern Office

814-816 ATLANTA TRUST CO. BLDG.

Atlanta, Georgia

Table To Be Used in Connection With Government Condition Report

To Be Issued at 11 A. M., Monday, July 21, 1924.
(Prepared by Geo. M. Rose & Co., of Charlotte.)

If the report is	The Yield per acre will be lbs.	Total Yield on Number of Acres Shown (In 500 lb. bales—000's omitted)			
		On 39,000,000 acres	On 39,500,000 acres	On 40,000,000 acres	*On 40,403,000 acres
65	134.6	10,977	11,118	11,258	11,372
66	136.6	11,146	11,289	11,432	11,547
67	138.7	11,315	11,460	11,605	11,722
68	140.8	11,483	11,631	11,778	11,897
69	142.8	11,652	11,802	11,951	12,072
70	144.9	11,821	11,973	12,124	12,247
71	147.0	11,990	12,144	12,298	12,421
72	149.0	12,159	12,315	12,471	12,596
73	151.1	12,328	12,486	12,644	12,771
74	153.2	12,497	12,657	12,817	12,946
75	155.3	12,666	12,828	12,990	13,121

These figures based on United States Department of Agriculture revised "pars" for 1924, which indicate a yield on July 16th of about 207 pounds per acre on 100 per cent condition. They will not hold good for succeeding condition reports.

*Acres planted 1924—40,403,000. Average number of acres abandoned per year for last five years—1,292,000, or 3.4 per cent.

Condition report July 2, 1923, 69.9; August 1, 1923, 67.2; mid-July condition about 68.5; ten-year average July reports 74.8; ten-year average August reports, 71.2; mid-July average, 73.0.

Market Comment

The Hunter Manufacturing and Commission Company says:

There has been a better inquiry for print cloths, sheetings and drills the past few days. Several large buyers have been covering their wants for August-September-October. The inquiry has included quite a wide range of constructions and has come from pretty much all over the country. Both the bag trade and shade cloth users have been well represented in this buying. The jobbers are doing little yet on branded goods and the large bleachers and printers are still inactive on print cloths.

Export business from the West Indies and South America continues on the scale of the past two or three months and a few 3.00 yard sheetings have actually been taken for the Levant. Inquiries have come recently from the Red Sea and East Africa, but so far only at unworkable prices.

A year ago during July, the cotton market declined below 21 cents for October, in anticipation of a large crop, which was never raised, and the cloth market even exceeded the cotton market in discounting lower prices. This year in contrast, probably because of the present curtailment and more acute spot cotton condition, neither market shows any marked disposition to discount crop conditions ahead of time. The cotton market seems to be disposed to accept present prospects, but not to anticipate the future to any great extent, while the cloth market on the average has shown only minor fluctuations for the last sixty to ninety days.

The acute buyer realizes that the present rate of curtailment is going to continue for the next sixty days, and that consequently whatever opinion he may hold regarding the new crop and October-November-December deliveries, he stands more risk of losing through delaying

August-September purchases, by the possibility of short supply, than of gaining through the possibility of lower price with production so heavily reduced.

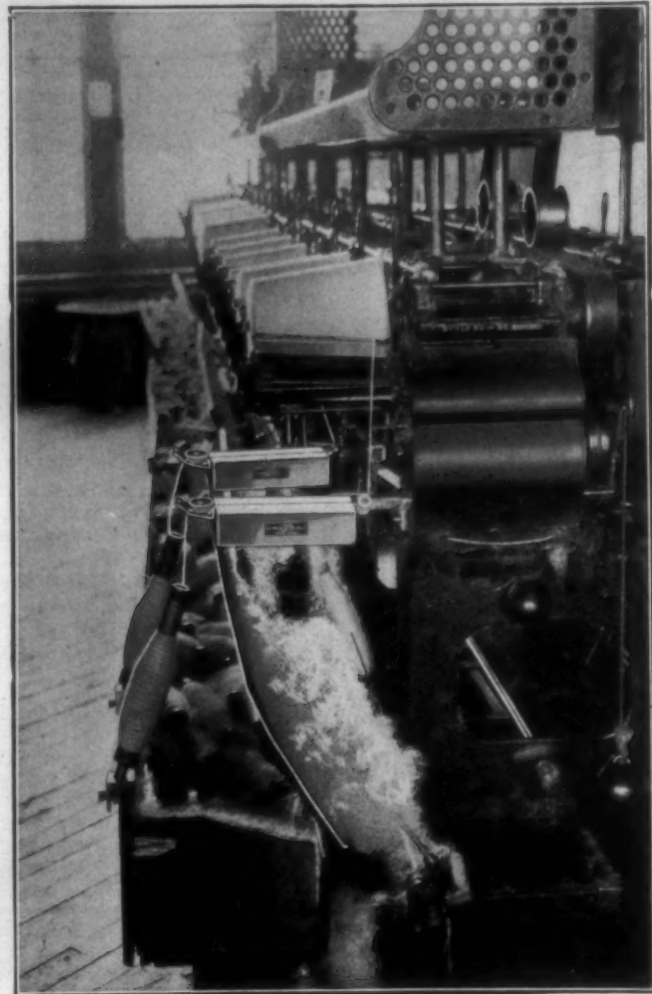
Total stocks of goods are no doubt no more than normal at the present time and most likely to be sub-normal by October. That these stocks are chiefly in the hands of the mills is well known, but that this really materially strengthens the situation is perhaps not so well realized. With an easy money market, and control lying in a moderate number of hands, the situation is likely to be handled to better advantage than if the accumulation was in the hands of jobbers and retailers. Tight money would have made a different situation.

Even those who do not grant the likelihood of any long continued advance in prices, or early return to full production, allow that the rapid curtailment that has been going on in production generally for the last two or three months is laying sound foundation for return, before long, to some improvement, which must be more than a temporary matter.

It might be pointed out that of all the important industries, building and construction is almost the only one that has not met with decided curtailment. We all grant that it is not likely that building can continue for any long period ahead at the rate of the past two years, and if not, it is an open question how much railroad freights and steel and iron manufacturers will miss its reduction. Pig iron output, by the way, has been cut fully 40 per cent since March.

Loray on Full Time.

Gastonia, N. C.—The Loray branch of the Jenckes Spinning Company, operating 132,000 spindles and a number of looms in the manufacture of automobile tire fabric, this week resumed full day and night operations.



Mr. Knitter—Do You Realize Your Loss From Waste?

How often do your knitting machines stop because of slubs—heavy and light spots in the yarn?

Do you know the loss of production from this cause? Do you know the amount in dollars and cents—that is, lost in waste that is thrown under the cutter's table due to cutting out holes through the use of imperfect yarn?

Do you realize the difference in production between running good yarn and bad yarn? With labor high, even the same percentage of waste in manufacturing becomes a heavier charge against your costs. Are you taking the best means of meeting this situation?

The successful men in the production of knitted textiles are those who, under the pressure of high prices, make use of the most effective methods of avoiding waste in manufacturing operations.

A Knitter can cut down waste in his plant and increase his production by using the best grade of yarn—that is, free as possible from imperfections. If a lower grade contains even one more imperfection to the mile of 30/1, it means fourteen more imperfections to the pound—fourteen thousand more imperfections to the thousand pounds; one thousand pounds is a small quantity to the user of yarn. Fourteen more imperfections is a severe handicap in the manufacture of any product.

You can positively cut down the waste in production by equipping your winder with the Eclipse Yarn Cleaning Device. By using this cleaner, any grade of carded yarn can be made a ninety per cent better knitting yarn. You cannot appreciate this fact until after you have used the Eclipse Yarn Cleaner.

If you knit direct from cones, take this vital matter up with your "Spinner"—he can deliver you a better yarn.

Ask us to send you full information—or better still—we will send our representative to give you an actual demonstration upon your request. When you write, please mention the type of winder or spooler you use.

Eclipse Textile Devices, Inc. Elmira, N. Y.

Makers of

Automatic Yarn Cleaner, Automatic Stop Motion, Yarn Tension Device
Eclipse Van Ness Dyeing Machine

Improved Spooling, Warping and Slashing Machinery

By a Representative of the Saco-Lowell Shops.

Spooler.

FOR many years textile machinery manufacturers made no improvements on the spooler, but since filling wind on warp yarn has been so widely adopted by the modern and progressive mills, the spooler has become a more important machine and there have been many improvements.

There are many satisfactory tension devices for spooling filling wind bobbins, built both by the spooler builders and by independent tension companies. There is no reason now, as far as the spooler is concerned, why a mill should not go onto filling wind for warp.

Spooling from filling wind bobbin has increased the spooler production from 30 to 50 per cent. It is easy for the mill man to figure how much additional floor space he has available when he replaces his old spooling and his old spoolers.

In our last article, we told you that a modern spinning frame was ten to fifteen per cent better in regard to production than an old one. By simply replacing your spinning and spooling with modern equipment, if you replace spindle for spindle, you will have to put more looms or you will have to find a market for surplus yarn.

Hand in hand with the develop-

ment of the modern spooler has come the invention of the weaver's knot tyer. What better proposition could a mill want than a higher speed spooler, no complicated mechanical drives or appliances, and two bright operatives using a hand knottier tying weaver's knots. One mill has said that they figured that it cost them \$75 to teach a girl to tie weaver's knots, and then they were never sure that she was always tying weaver's knots and not mixing in a few chicken-head knots. A satisfactory weaver's knot tyer is now on the market for handling yarns of 12s single or its equivalent and finer. It sells for \$35. It represents years of study and thousands of dollars in experimenting. It is clear to every manufacturer what this machine will mean when his yarn reaches a loom or knitting machine if all his spooler and warper tenders were using this hand knottier and were tying weaver's knots in every case.

Warpers.

Warpers are more accurately built now than in former years, and they are so built that they can wind at a much higher speed. In the last couple of years the most important improvement has been a new style creel which will take a cheese from a winder or a spool.

This creel occupies about one-half of the floor space of the old type creel. It is built entirely of steel. The spools are creeled just like on a twister. It requires about half the time in creeling that the old type of creel requires.

This creel is only slightly more expensive than the wooden creel. The yarn from each spool or cheese goes straight to the warper comb and not at angle, so all threads are given the same tension as they are wound on the beam.

Positive expansion combs are now being adopted by mills for their warpers. The comb insures that the number of dents per inch is the same in any part of the comb and insures absolute equal spacing of the yarn delivered to the beam.

Slashers.

The modern cylinder slasher varies little in fundamental details from the machine which you have always known. Refinements and minor patented features have come from year to year. Rising costs of labor of the type required to build a slasher made it necessary for the largest manufacturers of slashers in this country to buy expensive machines to take the place of this labor. It is only by the adoption of these machines for building slashers that the present price of the slasher

can be kept at anything like the basis that it is. By the old method of building slashers, they were built almost individually; now all parts are milled and are interchangeable. The slashers are erected in the mill in much less time than formerly, as the parts require no fitting worth mentioning.

British Textile Markets

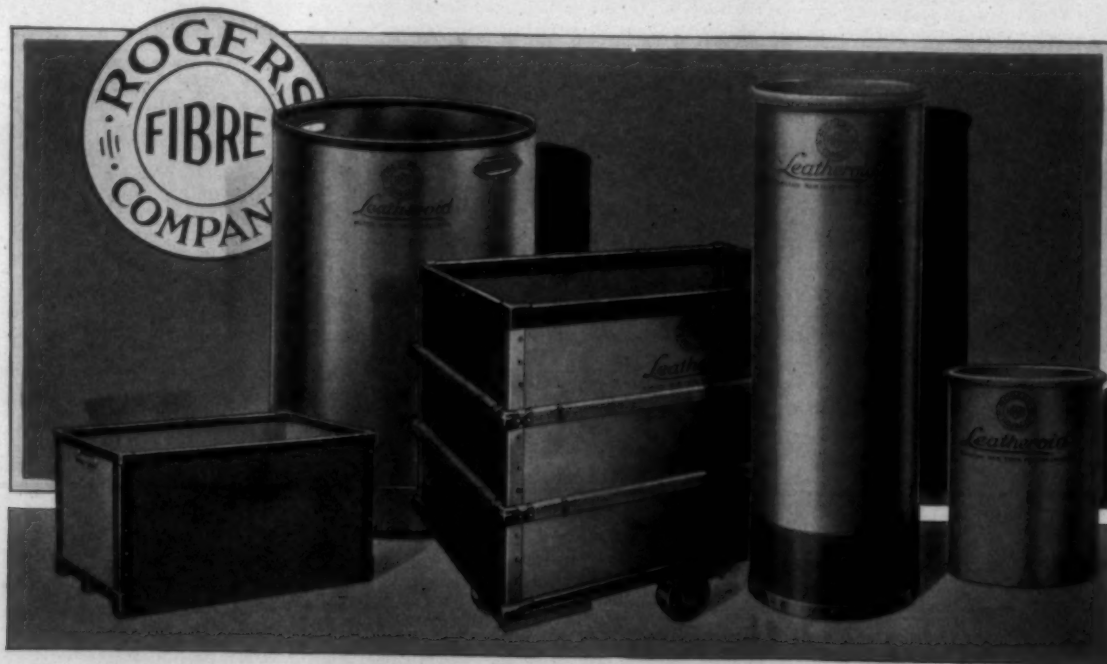
London.—Reports from Manchester indicate that the present outlook is the most promising for a long time. Inquiry is extensive and increasing attention is being paid to gray staples.

An encouraging feature is the exhaustion of stocks, which is evidently forcing purchases. The margin between buyers and sellers is narrowing. Some popular styles of dhooties are sold up until December.

India demand for dhooties has lessened, but instead gray shirtings, sheetings, mulls and jacconets are being bought considerably. The monsoon consists of moderate general rains.

The tone in the Bradford market is generally better, largely based on the results of the London colonial wool sales. The increase in business is unimportant.

**for durability
and service**



Leatheroid Receptacles
CANS · CARS · BOXES AND BARRELS

ROGERS FIBRE CO.

Sold Through Southern Supply Dealers

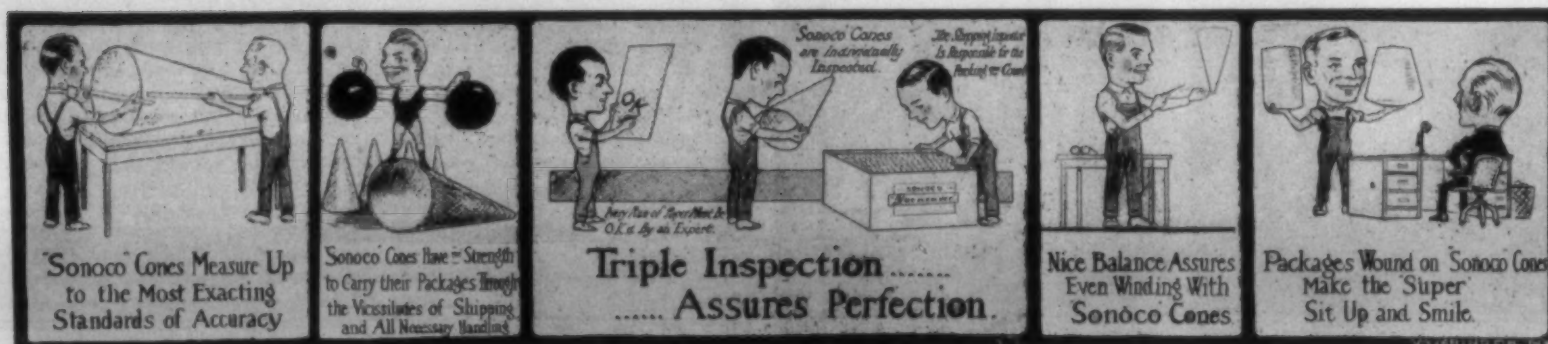
121 Beach St., Boston

1024 Filbert St., Philadelphia

78 Fifth Ave., New York

Sonocology and Its Relation to Better Equipment

By a Representative of the Sonoco Products Corporation.



IT would be a striking demonstration of the progress that has been made in spinning operations if we could show one of the primitive hand-made paper cones that were used half a century ago; and a long side of it place a 1924 Sonoco cone.

Has any one a sample of the old cones? We should like to have one for our Textile Museum. They were built up by pasting layer upon layer of scissored paper over a wooden form. They were inaccurate and variable in size and shape, being more or less crude, depending upon the skill of the individuals who made.

You may well believe that good spinning was a high art under the

slipping and wobbling conditions due to these crude centers.

Today we have the Sonoco cones and tubes, which are made by such exact methods, that it is well said of them that they "fit the mandrels like a glove"—or "they are like a part of the machine itself." And every cone is like every other cone—the mill man doesn't have to sort them or try them out for fit; nor does he have any doubt as to their true balance.

Perhaps one of the greatest achievements in the art of cone making was the Sonoco surfacing of cones—the production, by pulp content, in combination with machine methods, of a surface that would

catch the yarn at the first turn. Then came Sonoco Yarnsaver with the polished round nose—which not only greatly improved the smoothness of the take-off but accomplished a saving of a short length of yarn on every package.

Without exaggeration the statistician could tell us that the aggregate of these ends of the yarn, if tied together and wound around the world, would make a yarn surface on that sphere several inches—or miles—in thickness! And your mill superintendent, that official whose great passion is avoidance of waste, appreciates the "point" so well that at least 75 per cent of the cones he now uses are Sonoco Yarnsavers. About the only mills that still hold

to the old-style cones are those whose product is for cheaper or coarser purposes.

The manufacture of paper tubes has also been improved by automatic machine methods, that assure perfection and uniformity of product. The Sonoco convolute wound tubes have practically supplanted the ordinary spiral wound tubes, even in the tubes of larger diameter and up to 100 inches in length.

The convolute tube is of course preferable. It is wound accurately and is very strong.

All of the improvements in cones and tubes evidenced by the very modern Sonoco product are the result of years of experience in making.

(Continued on Page 31)

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Cotton Statistics Losing Value

AGAIN statistics failed to reflect accurately what might be expected!

With cotton supply data the most drastic which the country has had to contend with, with exports of cotton at a very large rate, with all indications that the cotton situation would develop into one of acute famine, the cotton goods market failed to respond, and prices finally gave way before the lack of cloth demand, says the Daily News Record.

This is not a new story, but it is largely a repetition of the market of the year previous. There has been impressed upon the buyers generally throughout the country, and it now seems clear that the same impression has been made on a majority of sellers, that when the raw material price passes beyond a certain level, the reaction on the finished goods market is almost immediate. It seems almost beyond question, to think of merchandising cotton cloths in a fair volume on a basis of the raw material at over 30 cents.

30-Cent Cotton Obstacle.

There are undoubtedly many who contend this is not true—that so far as the public is concerned, prices on 30 cents or higher cotton, have never really been tested out. However, the frame of mind of the buyer, both wholesale and retail, is such that he will not venture purchases on goods based on higher than 30-cent cotton, the result being that the advanced level automatically curtails buying, and the situation is never fully tested out.

What caused the market in the past six months to be what it was? Why, at a time when the country seemed fully prosperous, when business in most lines was moving along well, and when employment was general, with wages high, why under such conditions should the textile market react as it did, and act apparently alone? There are numerous theories—it seems that each individual has his own. However, all these find their way back to the big item of over-production. It is impossible to have the great number of mills in the South, and some in the North, operate steadily both day and night, at a time when our export outlets are considerably limited, and expect that this tremendous product can be readily absorbed by our own domestic market. There had been cautioned from time to time that this over-production would weigh heavily, and of itself bring about just such a condition as we have experienced.

Earlier Curtailment Urged.

Important factors in the industry started to advocate curtailed production last fall. Their theory was that if production kept on at a normal pace, the supply of cotton was so limited that it would not be long before a famine status would have developed, and it would be necessary for a great many spindles to shut down, owing to inability to secure raw material. This then

presented itself as a great likelihood. On the other hand, there was the general desire in the cotton manufacturing industry to keep cotton from going too high, realizing that there was danger when the commodity reached a level which would make it practically prohibitive in the finished product. Those who look back over this period say now that if curtailment had set in in a very serious manner late last fall, and had continued during the early months of this year, that cotton would never have gone to the 37-cent point, as it did, that the great over-production and large accumulations of merchandise would not have been present during the early months of this year, and that the situation generally would have been somewhat different from what it was.

It was urged last fall that a curtailment would have to set in either at that time, or it would have to come during the late spring and early summer months of 1924. However, it was insisted that curtailment during the summer of 1924 would be considerably less effective than would have been true if such action were taken at the end of the past year.

Has Lesson Been Learned?

The question is asked now repeatedly, whether the cotton manufacturers of this country have learned from the sad experiences of the first half of 1924, and whether, when the slightest indications of improvement are visible, the great majority of cotton mills in the South would immediately start running full time, and also start up their night shifts. Keen observers of the market trend make it clear that it is their personal opinion that it cannot be possible to keep on increasing the number of spindles and looms in this country, and at the same time keep on grinding out goods day and night.

Probably these factors were the underlying elements in retarding business during the passing months. There were numerous other difficulties which shared in holding trade back. There was as usual the presidential bugaboo.

For the first few months it looked as though we would get by this without the usual trouble. Then of a sudden the oil scandals and corruptions began to fill the newspapers, and immediately the realization that this is a presidential year took hold, convincing in itself that great uncertainty was ahead for all. This has, however, been dispelled since the Democratic nomination.

Cotton received its first set-back following the various influence on the stock market by the Washington oil scandal. Cotton held well throughout this period of slander scareheads on all the newspapers. From the time when publicity was first given to the oil investigation and the revelations attending this, the uncertainty regarding the political outlook grew, with the result that this became a factor of no

small importance in retarding business for quite a while.

The year 1924 thus far has been a very difficult one for the average cotton mill in this country. At no time has cloth been based on replacement. In a great many instances the market has been at times on a level which would mean only losses to many cotton mills. Normally, the rule in trading would be that when an article is under cost it becomes a good buy, the theory being that nothing can remain under cost for very long. This rule, however, has not been of any value during the past six months. For that matter, no rule has been of any particular use. Even up to this time a great many mills are operating decidedly at a loss, not knowing just when it would be possible for them to merchandise their product and break even, to say nothing of making a fair profit. Right now, and for the past six months, the chief aim of the cotton mills of this country has been to endeavor to avoid losses. Mills have been willing to accept business ahead, just in order to insure that they would not have to go heavy on the debit side of their ledger. It would seem, however, that but comparatively few have succeeded in this endeavor.

Today, while many optimists are giving out statements predicting that the turn of the market has been reached, or is close at hand, there is nothing definite to which one can point as a sure indication that we have reached the turning point.

It is true that hand-to-mouth buying of the closest sort has been current for practically a year and it is certain that wholesale and retail stocks must be low on desirable merchandise.

True, the fundamentals present are very strong. There arises the question whether in spite of this, the retail and the wholesale buyer will come in under conditions where higher prices are likely, and buy as freely, and follow prices as quickly, as was true during the big advance which ended early in 1920.

Also, there is the thought that numerous buyers have learned—that even though we might say the time is come when the trade would have to buy, and we believe they cannot hold out much longer, we have found; in spite of all this, buyers were able to manipulate and to carry on their business in a way which never before was believed possible. The big cry during the past year has been turnover and more turnover and with this has become customary the purchasing of very small lots, getting away almost entirely from contracts. At the present time, the average buyer claims that he is willing to learn more about 1924 cotton crops. The cotton situation is peculiar. Based on the acreage, a large crop would be possible. Recent progress has been very favorable—yet the crop will not be made for another month. A large crop is possible. Just in this hope, the trade continues to wait.

The fear of buyers has not always been fully explainable during the

past six months. They have never complained of the price of cloths. Invariably, the price of cloth has been considered very low. Cotton was too high and regardless of the low price of cloth, it was realized that should the raw material break, then influence on the cloth market would be direct, regardless of the already low levels for the finished product.

About Future Buying.

There has developed two factions in opinions regarding buying policy. On the one hand, there is the element which believed that the warehouses for the wholesaler are a thing of the past and that he will rely entirely upon his ability to make quick turnover, and thus permit the mills to carry the entire burden of stock. There is another element, however, insisting that the day of contract prejudice is now not distant. Curtailment has been heavy, and is expected to become greater. They believe that it will not be long now before buyers will come to this market, and will not be able to obtain readily for quick shipment the merchandise which they want. Such a development is believed to be inevitable, considering the extent of the curtailed production. Then when the buyer realizes that quick goods are not waiting for him, it might be necessary to wait several weeks before he can get shipment, then he will consider the situation differently, and then place contracts to insure the stock in time of need.

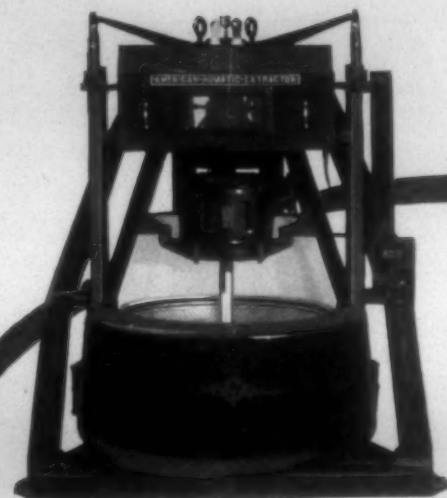
Export Trade.

The export business which has been exceedingly quiet and very limited through the past year, has shown indications to awaken during the past 60 days. This export business has been confined largely to low end colored yard goods to some bleached cloths, and to certain prints. The larger export business in the way of brown sheetings and twills which was always large with the Far East, has been conspicuously absent for some time, and there is no indication at present that business is about to be resumed. The Japanese have been taking away considerable of our foreign business in brown sheetings. This has been particularly true in certain parts of South America, the Philippines and in China. The Chinese also have been making great progress with their own merchandise, all of which has had a material effect on the export business here.

Broadcloth Popularity.

A great deal of attention has been focused during the past six months on the volume of English cotton cloths which has been coming to this country. This subject has been broached at all meetings of cotton mill men, and has been the subject of many newspaper articles as well as in all sections of countries where cotton cloth is made or sold. The hold on this market which has been obtained by the English broadcloths has been exceedingly strong. There has been an effort by shirting converters at various times to offset the spreading of the broadcloths, but this has met with small success.

(Continued on Page 30)



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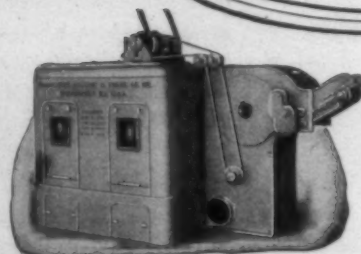
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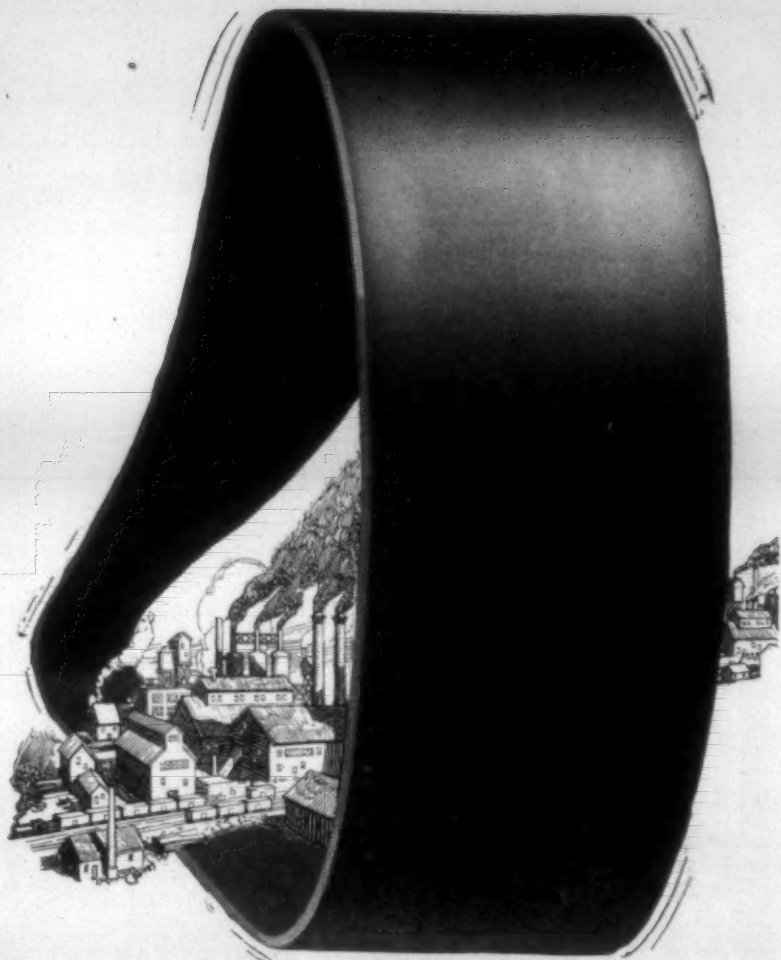
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Warp Wind vs. Filling Wind on Spinning

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THE question of the greater desirability of one method of winding in spinning over the other, as between the filling wind and the warp wind, is woven intimately also with the questions of spooling and of winding. Therefore, a discussion of the former may be expected to take into consideration the latter.

It is recognized that the more tenderly fiber is handled through the various processes the better the result, and each process presents its own problems in the best treatment of the fiber. On the spinning frame, at the point of winding, we find that the strain on the yarn is greater when winding on the bare barrel than on the outer diameter of the filled bobbin. It follows that if the period of time of winding on the bare barrel can be lessened, the strain on the yarn is lessened. Now while spinning with the filling wind the yarn necessarily runs to the bare barrel on each stroke of the ring rail. Nevertheless, each period of time at which it is winding on the bare bobbin is very short and a certain amount of elasticity of the yarn and in the ballooning may be called upon to provide a portion of the extra strength required for a few moments without the serious result of straining and breaking the ends. From this we deduce that the spindle speed may be increased without increasing the twist, and therefore, the front roll speed may be increased proportionately and a somewhat larger production obtained without a decrease in the quality of the yarn.

It follows also that a somewhat heavier traveler may be used to control the yarn; for the maximum speed obtainable must be no greater than the speed wherein the yarn can be controlled while spinning. It will be noted that the heavier traveler is to accomplish the equivalent of the lighter traveler with the warp wind, and therefore, we have assumed the same amount of strain upon the yarn in making this comparison. With the same amount of strain upon the yarn in making this comparison. With the same amount of strain in winding on the bobbin, the bobbin will be wound to the same density. There will not be an appreciable difference in amount of yarn on the bobbin. It is claimed by some experienced spinners that with the filling wind, because of minimum periods of strain, a still heavier traveler may be used which will wind the yarn more tightly and not impose such a condition as to cause the ends to strain or to break. This may also be accomplished if the increase of speed referred to has not been fully taken advantage of.

In this connection it is noteworthy that the finer yarns are spun with the filling wind. When the finer counts are attempted the cotton must be handled so tenderly as to require all conditions that may be provided

to handle it in a way most easily for itself.

In the case of warp wind the first layer is, of course, wound on the bare barrel of the bobbin and several subsequent layers on the nearly bare barrel, so that for a long period of time the yarn is being wound under an undue strain. During all of this time a light traveler must be used and the speed held down to prevent the ends from breaking in spinning. The weight of the traveler used, of course, is an average of the weight required in the middle of the bobbin from empty to full, with due respect to the weight required under the worst conditions, that of spinning on the bare barrel and at the bottom of the stroke and taking into account also the speed at which the frame is being run. Again, of course, the fiber used must be considered. With the coarsest counts the question of the type of winding is of less consequence than with the finer counts. It follows that it is of some consequence even with the coarse counts, and each number finer makes the method of winding more critical. When we arrive at medium counts, so-called, it becomes altogether important. Therefore, so far as spinning alone is concerned, it is generally conceded that the filling wind will give better results than the warp wind.

The process subsequent to spinning is winding in some form. The yarn already made with twist throughout its length will stand more severe treatment than yarn in the process of making between the front roll of the spinning frame, through the traveler, and on the bobbin. For a rough and ready way of winding onto the warper's bobbin, namely, the spool of the spooler, the bobbin holder on the spooler has been used very largely. In order to wind out of the bobbin holder the warp wind was developed. This substitution of warp wind for filling sacrificed considerable in spinning to assist winding.

It becomes evident that the questions grouped around winding have been investigated considerably. A satisfactory winding from that form of spinning package which is best for spinning is at once seen to be a satisfactory form of winding from the filling wound spinner's bobbin. Spooling from the bobbin holder with a filling wound bobbin, because of the varying speed of the bobbin unwinding from the outer diameter and from the barrel of the bobbin, presents difficulties which make such spooling unsatisfactory. The two methods employed for unwinding from the filling wound bobbins are either to place the bobbins on live side spindles or on skewers with the yarn drawn over the ends of the bobbins. The first method, that of unwinding from the bobbins placed upon spindles mounted in

(Continued on Page 33)

Twist in Ply Yarns

Every yarn or thread manufacturer wants a uniform twist in his ply products. A twist harder than the required standard means a production loss, while too soft a twist may mean an imperfect product unsuited for the use for which it is intended. Careful attention must, consequently, be given to this feature in manufacturing yarn. While twist in ply yarn is often as variable as are the sizings of single yarn, with the causes at times unexplainable, there are some difficulties of which the causes can be definitely established and removed.

Let us assume that 10 bobbins of a 2-ply yarn are taken from consecutive spindles and the turns per inch of yarn from each bobbin ascertained in a twist counter. It is probable that the twist of only 2 or 3 bobbins will be the same or nearly so, the variation of the others being in a variable degree from the average. If the yarn from these bobbins are tested again for twist, the average may be the same for twist, the average may be the same, but the twist in the yarn from the same bobbin may differ materially from that shown by the first test. If one of the bobbins shows a twist decidedly lower than the average, this would indicate one of the following causes: a slack band, a greasy band, a dry spindle or waste under the spindle sleeve, causing a slowing down of the spindle speed. Slack twist can also be brought about by other causes. Old cylinders are sometimes so deeply channeled by the bands that the driving circumference is reduced at the point of contact, causing a reduction of the twist at those points. Heavy travelers, as a result of excessive friction often fail to make the required number of revolutions, causing a soft end. For the same reason dry rings also have the same effect. Shaky spindles or unbalanced bobbins cause a similar vibration of the spindles and result in soft-twisted yarn.

One of the frequent causes of twist variation are worn spindle whorls. They do not wear evenly, as may be ascertained by testing the old spindles with a caliper. Whorls originally an inch in diameter will be found to vary in size from .90 to .98 inch. Excessive twist is also caused by worn bottom-rolls. Brass rolls used in wet twisting are especially subject to this defect. It is always caused by the top roll dragging behind the bottom-roll due to the friction caused by the tension of the ends from the creel, or the top roll binding in the cap bar.

The top rolls often get out of alignment with the bottom rolls, this being caused either by the wearing of the roll-pins or the cap bars. A top roll in this position increases the wear on the bottom roll, causing in time a decided depression at one end. The wearing of the bottom roll will cause a variation of twist between the yarns delivered by smaller circumference.

In the porcupine creel, a high twist is sometimes caused by an

occasional skewer becoming gummed up with a mixture of oil, grease and dirt. On tape-driven spindles of the 4-spindle drive, a tape may be accidentally moved from the whorl of one of the spindles to the upper part of the jacket. As this part is usually smaller than the whorl, there is a corresponding increase in the spindle speed, and consequently a greater twist put into the yarn.

It also happens that in replacing a broken spindle, a larger or smaller whorl may be substituted, the result being a variation of twist, greater or less than the standard, according as the whorl is too small or too large. When both coarse and fine yarns are made with a heavier band to drive the spindles for the coarse yarn, it occasionally happens that a light band is put on where only heavy bands should be used, and vice versa, causing a variation in the twist on those particular spindles.

It will often be found, however, that variations of twist are not so rapidly explained and at times cannot be explained at all. A twist test conducted with 10 bobbins illustrates such a case. The spindle speeds were taken at the time of testing, the results being as follows:

Bobbins	Speed	Turns
1	8100	32.25
2	8050	31.00
3	8050	32.00
4	8050	27.50
5	8100	30.75
6	8050	30.75
7	8050	29.25
8	8050	28.75
9	8050	29.00
10	8000	31.50
Average	8055	30.275

Seven spindles, 2, 3, 4, 5, 6, 7, 8, and 9 have the same speeds, and yet no two of them are putting the same twist into the yarn. The twist, 30.75, of only one spindle, 6, closely approached the average 30.275. On the other hand spindles 3 and 4 show wide variations from the average, the twist of the former being about 5.69 per cent greater, and that of the latter 9.16 per cent less.

In order to determine definitely the variation in ten-inch lengths of yarn, two bobbins of 2-ply yarn, fine counts, were selected, as shown in the following table:

	1	2
	31.50	29.00
	33.50	31.75
	28.25	32.25
	31.25	27.25
	26.00	33.75
	33.50	30.00
	29.00	31.00
	26.00	31.00
	32.75	31.50
	32.75	32.50
Average	30.45	31.00
High	33.50	33.75
Low	26.00	27.25

(Continued on Page 31)

Southern Railway System

Announces

Greatly Reduced Round Trip Fares for Summer Season, 1924

Summer Excursion Fares

to Mountain and Seashore Resorts on sale daily May 15-Sept. 30. Final limit Oct. 31.

Sunday Excursion Fares

From Salisbury, Winston-Salem, Greensboro, Goldsboro, Danville and intermediate stations to Norfolk, Morehead City and Wilmington (Wrightsville Beach). Tickets on sale Saturday night and Sunday, limit Sunday night, season May 31-August 30, 1924.

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Tickets on sale Friday and Saturday. Limit following Tuesday. Season May 16 to August 30, 1924.

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Charlotte, N. C.

SOUTHERN TEXTILE BULLETIN

Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

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THURSDAY, JULY 17, 1924

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D. H. HILL, JR.
JUNIOUS M. SMITH

Managing Editor
Associate Editor
Business Manager

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Better Spooling and Warping

OUR "Better Equipment Campaign" is this week devoted to spooling and warping and we are showing the improved machines of many of the manufacturers of such equipment.

Paying out a little money each week does not disturb some men like paying a larger amount at one time.

If some mill men would open up the box near their spoolers and after weighing the thread waste calculate the value of same if it had passed on through and been sold as goods or yarns they will realize that without knowing it they are paying in daily amounts in the course of a short period of time more than new spoolers would cost.

There is no use to blame the superintendent and overseers if the spoolers are old and dilapidated.

The worst looking place in some cotton mills is around the spoolers with broken boxes and tops and bent or idle spindles.

A badly wound spool will tangle and break on the warper and every end that breaks is liable to break or be tangled on the loom, causing loss of production and oftentimes bad places in the cloth.

Spoolers and warpers cost comparatively little and yet every strand of yarn must pass through them and be subject to the undue strain and breaks that may be caused by their defects.

Well wound and evenly made spools passing to improved warpers that insure every end being laid straight and with even tension, mean much to the man who weaves the warps at that mill or at some far-off mill.

One of the most striking developments in textile machinery in recent years has been the automatic spool-

ers and the high speed warpers of Barber-Colman Company.

They are wonderful machines and will, because of their efficiency and ability to save labor, come more and more into use.

The Consumption Report

THE Government report on cotton consumed during June contains a number of very interesting features.

In the first place, American mills consumed only 350,277 bales as compared with 542,026 in June, 1923.

This is a reduction in consumption of 191,749 bales, and allowing that 425 pounds of cotton goods and yarns will be produced from a bale of cotton means that 81,493,000 less pounds of goods were produced in June, 1924, than in June, 1923.

We have previously shown that curtailment up to June 1st had amounted to 297,000,000 pounds.

We must therefore realize the remarkable fact that—

The production of cotton goods and yarns by American mills from August 1, 1923, to July 1, 1924, was 360,000,000 pounds less than from August 1, 1922, to July 1, 1923, and the curtailment during the cotton year ending August 1, 1924, will probably exceed 425,000,000 pounds.

It represents an enormous amount of cotton goods "not made" and statistics relative to the reduced use of cotton goods by women, use of artificial silk, etc., are so insignificant in comparison as to be worthy of little consideration.

Unless all laws of economics have failed this enormous amount of goods that normally would have been made and would be in the hands of the consumer or the merchants but which now do not exist, must eventually cause a shortage of

cotton goods and prosperity for the mills.

The consumption report shows that Southern mills held on July 1st, 490,000 bales, which at the rate of their June consumption 247,000 bales will run them to about September 1st.

Northern mills held on July 1st, 460,000 bales, which at the rate of their June consumption of 103,000 will run them to about November 15th, and even if their consumption revives their holding of high price cotton will last them well into the fall.

The amount held by consuming establishments, North and South, was 950,000 bales and in public storage 882,000 bales, giving a total 1,832,000 as compared to 2,574,000 bales July 1st last year.

These figures do not take into consideration the farm holding which, however, are very small.

They indicate an August 1st world carry-over of American cotton of 1,750,000 bales.

The world carry-over in recent years has steadily declined as follows: 9,200,000, 4,900,000, 2,500,000 and 1,750,000.

The vital question during the next twelve months will be where it will go from 1,750,000 bales.

Eastern North Carolina

WE had occasion on last Thursday and Friday to again take a trip of over 500 miles through the cotton counties of eastern North Carolina, including Robeson, the banner cotton county of this State.

The continual rains have put cotton in that section in a serious condition.

The fields in many places are so completely foul with grass that the cotton is being choked out.

Although it was almost the middle of July, it was very rare to see a cotton bloom.

We understand that eastern South Carolina and a part of Georgia are in the same condition.

Our remarks only apply to these three States but a greatly reduced yield may be confidently expected from them.

Women as Mill Presidents

CONSIDERABLE comment has been caused by the election of Mrs. E. Sternberger as president of the Revolution Cotton Mills and the Greensboro and other papers have announced it as the first case of a woman being elected as president of a cotton mill.

As a matter of fact Mrs. S. J. Smitherman has been president of the Smitherman Cotton Mills for at least six years, the late Mrs. H. J. Rodman was president of the Rodman-Heath Mills for a number of years and Mrs. J. W. Cannon has been president of the Wiscassett Mills for two years. There are a number of other cases which we do not recall now.

Louisiana Lives Up

WE learn with much pleasure that the Louisiana Legislature which adjourned last week refused to surrender their State's Rights by ratifying the Labor Amendment.

We do not know that they legally passed an anti-ratification resolution but assume that they did so.

Louisiana will now be attacked by the "Liars League" with the statement that they desire to employ little children, but it is a fact that Louisiana does not permit the employment in factories of children of less than 14 years of age.

A Letter

Bradley Manufacturing Co.
Columbus, Ga., July 12, 1924.

Mr. David Clark, Editor,
Charlotte, N. C.

Dear Mr. Clark:

Your editorial on the Georgia Legislature's action was great and I feel sure is greatly appreciated by all, and trust it will have some influence with the other States when their time comes for ratification.

With my best personal regards,

Yours very truly,

FRANK E. HEYMER,
Supt.

New Yorkers in the Negro Church

(From The Spartanburg Herald.)

This is the story going the rounds of the street yesterday: For the last day or so Dr. Seth M. Milliken and his brother, Mr. Gerrish H. Milliken, and other members of their party have been in Spartanburg visiting mills in which they are interested, having come South in their private car.

The other evening they were at Pacolet and at the suggestion of Mr. V. M. Montgomery, president of Pacolet, attended services at a colored church in the neighborhood. The preacher, noticing the presence of distinguished guests, took occasion to pay a tribute to Mr. Montgomery, speaking at length upon his many kindnesses shown the colored folks of that region.

Concluding his respects to Mr. Montgomery, he announced: "And we have with us this evening other distinguished company, two visitors from New York."

Just here the Messrs. Milliken are said to have become self-conscious, pulled down their vests and cleared their throats, anticipating perhaps an occasion for a "few remarks."

But the preacher concluded: "Yes, we have with us Brother Porter and Brother Bailey." He was referring to the two colored porters who had come down with the Milliken party and were in the audience.

Personal News

R. G. Wood has accepted the position of superintendent of the Wampum Mills, Lincolnton, N. C.

H. C. Duffer has resigned as superintendent of the Tolar, Hart and Holt Mills, Fayetteville, N. C.

John C. Toler is now superintendent of the Tolar, Hart and Holt Mills, Fayetteville, N. C.

J. A. Parker has resigned as superintendent of the Wampum Mills, Lincolnton, N. C.

S. N. Willard is now overseer of weaving at the Lullwater Manufacturing Company, East Point, Ga.

Frank M. Foster has resigned as overseer No. 1 carding at the Thomaston Mills, Thomaston, Ga.

Julius W. Cone, of Greensboro, has been elected first vice-president of the Revolution Cotton Mills, of that city.

W. M. McKinney has resigned as overseer carding and spinning at the Peerless Cotton Mills, Thomaston, Ga.

W. G. Thomason has been promoted from second hand to overseer of spinning at the Peerless Mills, Thomaston, Ga.

Walter Massey, overseer of No. 2 carding at the Thomaston Cotton Mills, Thomaston, Ga., has been given charge of No. 1 carding also.

Charles E. Rickard has accepted the position of overseer of the cloth room at the Exposition Mills, Atlanta, Ga.

J. F. Brasch, who has been in poor health for some time, is undergoing treatment at the Davis-Fischer Sanatorium, Atlanta, Ga.

A. H. Hamilton, of Selma, N. C., has accepted the position of overseer of carding at the Kinston Cotton Mills, Kinston, N. C.

Phil B. Marsden, of the Howard Bros. Manufacturing Co., Worcester, Mass., visited the Southern office in Atlanta last week.

C. E. Hutchison, president of the American Yarn and Processing Company, Mt. Holly, N. C., has returned from a business trip to New York.

J. F. Snipes has resigned as second hand in spinning at the Belton Mills, Belton, S. C., to become overseer spinning at the Grendel Mills No. 2, Greenwood, S. C.

B. M. Bradford, of Waxahachie, Tex., has become overseer carding and spinning at the Lullwater Manufacturing Company, East Point, Ga.

J. T. Phillips, formerly superintendent of the Division 1, of the Manville-Jenckes Company, Gastonia, N. C., has become general superintendent of the Kinston Cotton Mills, Kinston, N. C.

R. E. Biles has not resigned as superintendent of the Robbins Knitting Company, High Point, N. C., as recently reported through error.

C. M. Padgett, superintendent of the Seneca Mills, Seneca, S. C., and several members of his family were painfully but not seriously injured in an automobile accident last week.

John M. Short, formerly superintendent of the Oneida Mills, Graham, N. C., has accepted a similar position at the Altavista Cotton Mills, Altavista, Va.

Mrs. Bertha M. Sternberger has been elected president of the Revolution Cotton Mills, Greensboro, N. C., succeeding her husband, the late E. Sternberger.

W. M. Sanders Dead

W. M. Sanders, of Smithfield, N. C., banker, merchant and formerly a cotton manufacturer, died last week at Clifton Springs Sanatorium, Clifton Springs, N. Y., where he had been taken for treatment.

Mr. Sanders, who built up a large mercantile interest in Smithfield, was one of the organizers and builders of the Ivanhoe Manufacturing Company, of that place. For many years he served as president of the mill. He was also for some time vice-president of the Selma Cotton Mills. He was 66 years old and is survived by Mrs. Sanders and several children.

Andrews Loom Harness Co. To Enlarge Plant.

Spartanburg, S. C.—The Andrews Reed Loom and Harness Works is preparing to add a third story to a portion of its main building in order to increase the capacity of the plant. The portion on which the addition is to be made is approximately 60 by 80 feet. A permit for the work was granted by the city building inspector, the estimated cost as stated being \$2,500.

Isaac Andrews, proprietor of the plant, stated that some machinery would be placed in the new third story, but that the bulk of the manufacturing carried on there would be done by hand. He said that he was unable to estimate the percentage increase in the plant's capacity because of the nature of the business which fluctuates considerably, some of its products being more in demand at times than others; and the new floor space being adapted for the manufacture of several different articles ordinarily made as the market justified.

Cotton Bleachers

Your Selling Agent

wants new talking points.

A permanent White

on bleached Cotton goods is something unusual.

In Solozone bleaching

you can also guarantee

unweakened, soft,

elastic goods

at no higher cost.

Let the selling Agent

see such goods.

The Roessler & Hasslacher Chemical Co

709 Sixth Ave.

NEW YORK CITY

Artificial Silk

This is comparatively a new material for fabric making but is rapidly growing in favor for mixed fabrics, especially with cotton mills on all sizes of average numbers, fine and coarse. The artificial silk yarn is so different from yarn of any other material that it requires special attention to the harness-eye in order to make a satisfactory fabric.

From the very first, when this new material began to be used, we have been making heddles for artificial silk yarns and have continued to improve and perfect the harness-eye until now it is generally conceded that any mill, whether making cotton, silk or other fabrics, can without hesitation depend upon our artificial silk loom harness to make a fabric with entire satisfaction. And the beauty of it is that these heddles are interchangeable for use on cotton, silk, and yarns of other material just as well.

STEEL HEDDLE MFG. CO.

GREENVILLE

PHILADELPHIA

PROVIDENCE

"Duplex" Loom
Harness—complete
Frames and
Heddles fully
assembled

Harness Frames
Selvage Harness
Leno Doups
Jacquard Heddles

SOUTHERN PLANT
Greenville, S. C.

HAMPTON SMITH
Southern Manager

Drop Wires
Nickel-Plated
Copper-Plated
Plain Finish

Improved
Loom Reeds
Leno Reeds
Lease Reeds
Combs

MILL NEWS ITEMS OF INTEREST

New Orleans, La.—It is reported that the Alden Mills of this city are planning to erect a large new plant near Dallas, Tex.

Parkersburg, W. Va.—The United Woolen Mills, of Columbus, O., has taken over the United Woolen Mills Company.

Anderson, S. C.—The Anderson Hosiery Mills plan to install a considerable amount of new machinery. The company recently issued \$40,000 in preferred stock to provide funds for enlarging the plant.

Union, S. C.—Stockholders of the Excelsior Mills will meet July 31 for the purpose of voting to increase the capital stock from \$500,000 to \$800,000. The proposed increase will be used to enlarge the mill.

Albany, Ala.—The hosiery plant of the Cooper-Wells Company is idle during the summer period and while it is not running, extensive improvements are being made. Resumption of operation has been set for July 18.

Greenville, S. C.—The Nuckasee Manufacturing Company, through J. E. Serrine & Co., engineers, expects to let contract this week for an addition, 50x100 feet, two stories, to its plant here. The mill manufactures underwear.

Lowell, N. C.—The installation of machinery at the new Art Cloth Mills has been completed and manufacturing will begin within a few weeks. The mill will produce a fancy silk mixed and cotton dress goods, shirtings and draperies. The mill was built to accommodate 1,000 looms, and 600 of them are included in the initial installation.

Greensboro, N. C.—Stockholders of the Revolution Cotton Mills elected Mrs. Bertha Sternberger, president. She is one of the few women mill presidents in the South, perhaps in the United States.

She succeeds her late husband, E. Sternberger, who died at his home here last May 27. Another officer was also chosen, Edward B. Benjamin, son-in-law of Mrs. Sternberger, as second vice-president. Julius W. Cone remains first vice-president. Three new directors were named. Mrs. Sternberger, her daughter, Miss Emelia Sternberger, and Mr. Benjamin.

Goldville, S. C.—The Joanna Mills, through the offices of Lockwood, Greene & Co., have awarded contract to W. M. Welch, of Greenville, for the construction of 45 new cottages in the mill village. The contract for the extension to the mill building will be let within a short time.

Cornelia, Ga.—The Board of Trade is interested in a plan to build a cotton mill here.

Marietta, Ga.—Marietta Knitting Company, the largest exclusive manufacturers of men's hosiery in the State, are now turning out approximately 20,000 pairs of mercerized hosiery per day. This plant department for the manufacture of rugs, using their hosiery waste

clippings as filling for the rugs. buys its yarns, then dyes, bleaches and finishes its products. This plant is now installing a weaving

Summerville, Ga.—Lockwood, Greene & Co., engineers of Atlanta, Ga., and Boston, Mass., are supervising an extension of 20,000 square feet to be added to the present mills of Summerville Cotton Mills, Summerville, Ga. The extension will

house 4,000 additional spindles and 100 looms.

In addition, Lockwood, Greene & Co., engineers, will supervise the re-arrangement of the opening and picker rooms in order better to prepare the cotton for spinning and weaving. The work also includes the electrification of the plant, which heretofore has been operated by a steam engine.

Marble Falls, Tex.—The building of the new Marble Falls Cotton Mills is now virtually complete. Work on the dam for the power plant was started this week. The mill will have 15,000 spindles, using hydro-electric power. General offices of the company are located at 1105 Merchants Bank Bldg., Dallas, Tex. N. E. Witt, of Dallas, is president.

Automotive Plants Buy More Textiles

Detroit, Mich.—While no extensive textile purchases are contemplated by automotive plants during the readjustment period made necessary to a great extent by slow movement of cars through retail sales, a decided improvement in this latter connection is evidenced by releases from makers on both raw materials and finished parts which have prompted a number of auxiliary factories, notably body companies, to make good sized purchases of staples in cotton goods and to announce that increased volume of buying is planned from now on in accordance with enlarged production schedules.

It is stated by practically all of the auto manufacturers in the Detroit territory that full time operation is contemplated before the end of the summer. It is reported that the Ford and Dodge plants, which have not made any decided cuts in their production, are planning to resume full schedules before long, but it is also known that they have contracted for large quantities of textiles sufficient to fill their requirements until about the middle of September.

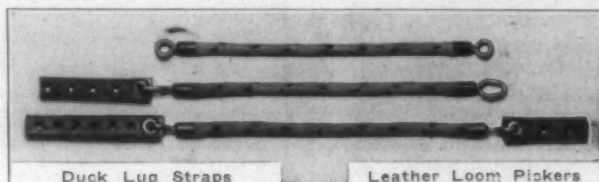
On the whole, however, practically all of the other automotive plants will be in the market during the next sixty days, due to the fact that inventory taking just completed indicated low stocks which must be replenished in line with plans for a gradual increase in production that have been given quite an impetus by the encouraging reports regarding movement of cars that are coming in from almost every section of the country. This development has been productive of an optimistic feeling in the industry and has largely eliminated a reluctance to make any purchases that was freely expressed by purchasing agents at certain plants less than a month ago.

THE FARISH COMPANY

COMMISSION MERCHANTS

100 WORTH STREET

NEW YORK



Duck Lugs Straps

Leather Loom Pickers

E. H. JACOBS MFG. CO., Danielson, Conn. Established 1869
Southern Factory Branch, Charlotte, N. C.



The Macrodi

FIBRE HEAD
WARP SPOOL

after fourteen years of the hardest mill use has demonstrated that it is

Durable—Economical

Write for particulars of the added traverse with corresponding increase in yardage—an important feature of this spool.

Prompt deliveries in two to three weeks after receipt of order.

MACRODI FIBRE CO.
Woonsocket, Rhode Island

Members American Society Landscape Architects

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CHARLOTTE, N. C.

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ATLANTA, GA.

LANDSCAPE ARCHITECT and ENGINEER

Town Planning and Mill Village
Developments
Parks, Real Estate Subdivisions
and Cemeteries
Resort Hotels and Country Clubs
Private Estates and Home Grounds

Complete Topographic Surveys
General Designs, Planting, Grading
and Detail Plans
Supervision of Landscape and
Engineering Construction and
Sewer and Water Development

Largest Landscape Organization in the South

Although business in local jobbing houses still indicate the ascendancy of flock dot and plain voiles it has undoubtedly developed a better tone, which is looming up to advantage daily and is pointed out as the forerunner of a splendid fall season. Local jobbers for the most part are convinced of the fallacy of special sales as a means of stimulating business even during lull periods and are concentrating on bringing about a return of buying by retailers on a more normal basis.

On the other hand, Detroit retail stores have been conducting a large variety of sales on all kinds of wash goods and silks in an effort to make up for slack selling of these lines during the unfavorable weather period in the spring and early summer. A very favorable response is reported, but in a great many instances prices have been extremely low.

Lineberger Receives Black Hand Letter

A series of anonymous letters, beginning with a threat which included a demand for \$1,000, and ending with a plea that the writer not be prosecuted if his identity be discovered, has been received by A. C. Lineberger, prominent yarn manufacturer of Belmont, N. C.

The first letter demanded that \$1,000 be placed at a designated spot on the front lawn of Mr. Lineberger's home on a certain night and bore the threat that the house would be blown up should the terms

of the letter not be complied with.

The letter was received a week ago and officers spent the night on the lawn of the home, guarding a dummy package that had been prepared for the purpose of enticing the writer of the letter into their hands.

Guards have been maintained at the Lineberger home for the past several days, since the letter bore, not only a threat that the house would be blown up, but that either a son or daughter of the family would be kidnaped if the terms indicated should not be complied with.

Late last week, however, other communications were received from the anonymous writer, urging that he not be prosecuted should the

officers discover his identity and expressing sorrow at having caused a disturbance.

June Output Cut Sharply

Washington, July 14.—Cotton consumed during June totalled 350,277 bales of lint and 39,583 of linters, compared with 413,649 of lint and 42,481 of linters in May this year and 542,026 of lint and 48,944 of linters in June last year, the Census Bureau announced today.

Cotton on hand June 30 was held as follows:

In consuming establishments, 950,625 bales of lint and 110,778 of linters, compared with 1,157,778 of lint and 122,043 of linters so held on May 31 this year, and 1,347,468 of

lint and 144,726 of linters so held on June 30 last year.

In public storage at compresses 882,204 bales of lint and 69,741 of linters compared with 1,126,711 of lint and 74,437 of linters so held on May 31, this year, and 1,227,184 of lint and 42,224 of linters so held on June 30, last year.

Imports during June totalled 13,641 bales, compared with 16,017 in May this year and 13,367 in June last year.

Exports during June totalled 230,979 bales, including 13,381 bales of linters, compared with 326,357, including 19,255 of linters in May, this year, and 214,851, including 1,902 of linters, in June last year.

Cotton spindles active during June totalled 29,216,486, of which 15,582,725 were in cotton growing States, compared with 30,493,165, of which 15,784,301 were in cotton growing States in May this year, and 34,855,520, of which 16,021,970 were in cotton growing States in June last year.

Statistics for cotton-growing States included:

Cotton consumed during June, 247,478 bales, compared with 289,987 in May this year and 351,181 in June last year.

In public storage and at compresses, 749,269 bales, compared with 962,786 on May 31, this year, and 935,636 on June 30, last year.

LOOM STRAPPING

Check Straps--

Lugs,

folded and stitched, cemented—

Rounded and flat

Harness Straps--

Bumpers--

Hold-ups--

Binder Straps--

Power Straps--

Friction Discs--

We specialize and know your looms.
Ask your jobber.

The Druid Oak Belting Co., Inc.
Baltimore—Boston

Joseph L. Davidson Co.

Established 1889

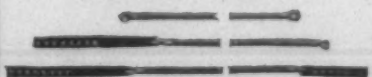
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FOR ALL TEXTILE FABRICS

2525 N. Second St., Philadelphia, Pa.

Improved Dobby Chain



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Send Us Your Order Today

ECONOMY COAL

STEAM and DOMESTIC COALS
FROM OUR OWN MINES

New River and Pocahontas
High Volatile Splint and Gas

Sugar Creek Coal Sales Company

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Better Equipment

Means

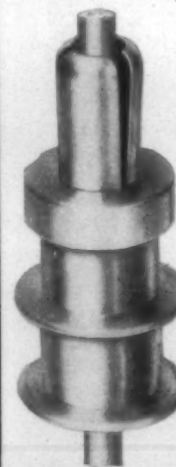
More Production

By

Applying

Patented
Clutch

To Your
Spindles



Send us one of
your spindles and
one or two of
your bobbins and
we will equip
same with our
CLUTCH, gratis.

All Kinds of SPINDLES repaired

Fournier & Lemoine
Linwood, Mass.

THE CHOICE OF A HUMIDIFYING SYSTEM

must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Company's method of humidifying, all such requirements are GUARANTEED

Our COMINS SECTIONAL HUMIDIFIERS

Our FAN TYPE and HIGH DUTY HUMIDIFIERS

Our VENTILATING Type of Humidifier (Taking fresh air
into the room from outside)

Our ATOMIZERS or COMPRESSED AIR SYSTEM

Our COMPRESSED AIR CLEANING SYSTEM

Our CONDITIONING ROOM EQUIPMENT

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Are all STANDARDS OF MODERN TEXTILE MILL
EQUIPMENTS

AMERICAN MOISTENING COMPANY

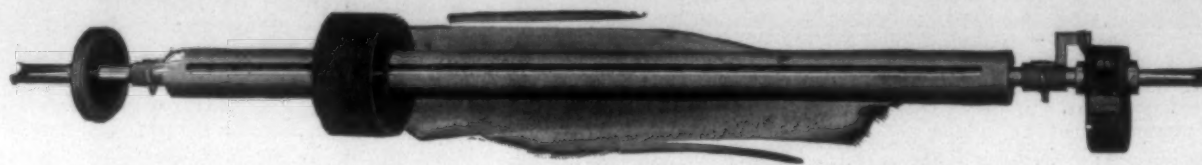
BOSTON, MASS.

RUSSELL GRINNELL, President

SOUTHERN OFFICES, 276 Marietta St., Atlanta, Ga., No. Charlotte, N. C.

FRANK B. COMINS, General Manager

Textile Grinding Machinery Of All Kinds



Send in Your Old Grinders to be Repaired

Southern Agent, E. M. TERRYBERRY, 1126 Healy Bldg., Atlanta, Ga.

B. S. ROY & SON CO., WORCESTER, MASS.

Established 1868

Cotton Statistics Losing Value

(Continued from Page 22)

Furthermore the broadcloths have worked their way to the women's wear fields; and have been used in a fair way for various garments such as blouses, shirts and underwear. At the present time the indications are that these broadcloths will continue to make further headway in the women's wear trades. Domestic broadcloths are getting more attention. For sometime the American mills refused absolutely to endeavor to meet the prices that were quoted abroad. It is clear that American mills have now gone after this broadcloth business, and several large mills sold considerable merchandise at prices which were under the lowest quoted in England. Right now the English prices are considered rather a little high.

Voiles had a good season. These have been popular with dress manufacturers, and have also been used to some extent for women's underwear. These voiles continue at the present time in demand.

Another big element in the wash fabric business this season has been the big demand for linens. Dress linens have been imported in a large volume, and have been used extensively throughout the country. There is no question whatever that the dress linens have replaced many cotton cloths, and the great use of the linens has reflected very seriously on a number of types of cotton fabrics.

Unquestionably gingham have been among those affected by the use of other fabrics for dress wear. It has been pointed out that dress linens have been made up in a considerable way even to taking the place of gingham. Voiles and a number of other fabrics have also been used for the same purpose, replacing colored yarn cloths.

Van Heusen Patents Upheld

New York.—A victory for John M. Van Heusen and the Phillips-Jones Corporation in their patent infringement suit against Cluett, Peabody & Co., Inc., and Earl & Wilson is portended as a result of an opinion

made public by Judge Learned Hand on Saturday. Judge Hand sustained the basic patent of Mr. Van Heusen in a broad manner, and held all of the Cluett, Peabody and Earl & Wilson semi-soft or "webbing" collars to be infringements on the Van Heusen articles.

It is pointed out that unless the decision of Judge Hand is reversed or modified on appeal, the defendants will be enjoined from making or selling any of the collars involved in the litigation, and that they will be compelled to pay to Van Heusen and the Phillips-Jones Corporation all profits and damages resulting from their past alleged infringements. While it is difficult to estimate the possible amount of damages it is believed certain that the figures will run above \$4,000,000. It will be recalled that during the course of the trial, which was held in the U. S. District Court, Mr. Van Heusen testified that he himself had collected more than \$1,000,000 in royalties from the Phillips-Jones Corporation in the sale of his collar.

It is also believed certain that Van Heusen and the Phillips-Jones

Corporation will instigate similar proceedings against other Troy houses and a New York concern in an effort to collect damages from them. Some of the concerns mentioned during the course of the trial were Geo. P. Ide & Co., Hall, Hartwell & Co., United Shirt & Collar Co. (now Lion Collars & Shirts, Inc.), William Barker Co., the Van Zandt-Jacobs Co., and the Manhattan Shirt Co. It also is regarded possible that a second New York house will be named in any proceedings to collect additional damages.

The Van Heusen case is one that has attracted widespread interest in the textile industry. It has been in court for about two years, and present indications are that legal proceedings will continue for another year at least. An appeal undoubtedly will be taken on behalf of Cluett, Peabody & Co., Inc., and Earl & Wilson, while the plaintiffs are expected to enter a decree seeking an injunction restraining the defendant companies from manufacturing collars of the type mentioned in the suit. It is regarded as practically certain that the injunction will be granted.

Established 1896

Incorporated 1914

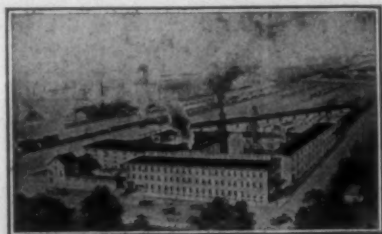
LOWELL SHUTTLE COMPANY

Manufacturers of

BOBBINS POOLS SHUTTLES

Write or Telegraph for Quotations

Office and Factory: 19 Tanner St., LOWELL, MASS



DAVID M. BROWN
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THE DAVID BROWN COMPANY
Lawrence, Mass.

All Our Products Made in One Up-to-the-Minute Factory Group

"HIGH GRADE"

Bobbins, Spools and Shuttles

Correspondence Solicited

Catalog on Request

Twist in Ply Yarns

(Continued from Page 25)

Spindle speeds were uniform for the two spindles. No attempt was made to determine the uniformity of bottom roll or spindle whorls. This test shows even more clearly than in the previous tests how widely twist varies, for there is here in each case the same end in 10 consecutive lengths. Bobbin 4 varies from 26 to 33.50 turns per inch, with an average twist of 30.45; whereas bobbin 2 shows an average of 31.00 turns, a high point of 33.75, and a low point of 27.25. What is the cause? Why should the twist in one ten-inch length be 31.25, and the next length of the same end only 26 turns, while the third rises to 33.50? Even when the conditions are favorable for uniform twist, with the bottom roll, spindle whorl and cylinder of the right size, the travelers in good condition, the rings properly lubricated and uniform tension on the ends from the creel, there may still be a wide variation in the twist. A variation will be found in yarn taken from frames newly started, in which the conditions are usually as nearly right for good work as the machine builders can make them.

In testing a lot of yarn for twist it is a mistake to test only one bobbin and that bobbin only once. For example, in the first table the yarn from bobbin 1 has 32.25 turns of twist, which is nearly 2 turns over the average. The yarn from bobbin 4, on the other hand, is 3 turns under the standard. If the test for twist had been made only on the yarn from either of these bobbins the section hand would have put on a larger gear in the first case and a smaller one in the second, causing deficient twist in the first place and excessive twist in the second place. In making tests for twist ten bobbins should be taken at random from ten different spindles. It is also advisable to use a ten-inch length of yarn in the twist counter.—Textiles.

Sonoconology and Its Relation to Better Equipment

(Continued from Page 21)

ing these essentials for textile mills. They have required special automatic machinery and the creation of a plant that in many ways is unusual. But plant only, however good, would not turn out such a dependable product. There is required a nucleus of specially trained operatives who have grown up with the business.

The Sonoco cone or tube that you buy has been made with as much care as any part of your winding machinery and it is quite as important, if you are to accomplish the great desideratum "a hand-somely wound package that hand-somely unwinds."

In cloth winding operations Sonoco cores are gradually replacing the old iron cores. Experience has shown just what thickness is required to sustain the weight of the different cloths, or number of yards

wound. The accuracy of the large Sonoco tubes, their homogeneity and durability adapt them to almost every winding operation and they are universally displacing iron cores where these have been used—at very great saving, as the winder appreciates.

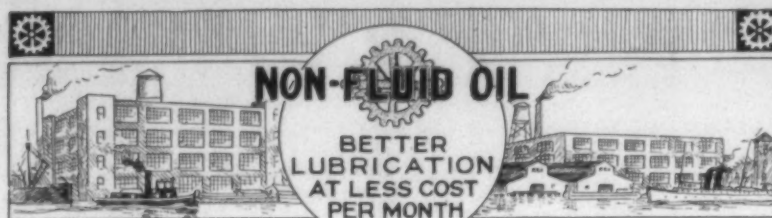
Piece Goods in India.

Piece goods imported into Bombay during the year ended March 31, 1924, amounted to approximately \$41,772,236. Of this amount Great Britain contributed goods with a value of \$27,120,558; Japan, \$10,039,719; and the United States, \$590,261. There was a big drop in the imports from the United States as compared with the two previous years when the following were the values of the goods imported: 1921-22, \$1,759,429; 1920-21, \$1,960,000. The higher priced goods of American manufacture could not hold their market against the cheaper goods from England and Japan. England has practically a monopoly on bleached whites and the better grades of dyed goods. Imports from Japan are mostly greys and a small quantity of the cheap dyed goods. Imports from the United States are plain greys.—Consul Wilbur Keblinger, Bombay, May 30.

The Indian piece goods market continues dull. May imports of cotton cloth amounted to 140,932,000 yards comprising 66,113,000 yards of grey goods, 47,194,000 yards of bleached, and 27,625,000 yards of colored. These figures represent a decline in all items from the April receipts which included 69,296,000 yards of grey goods, 49,272,000 yards of bleached, and 30,281,000 yards of colored cotton cloth—a total of 148,849,000 yards. In May Great Britain supplied 87 per cent of the grey, 98 per cent of the bleached, and 88 per cent of the colored goods imported. Japan is credited with 12 per cent of the grey and 7 per cent of the colored, while 1 per cent of the bleached came from Switzerland, and 2 per cent of the colored cloth from Italy.—Cable from Consul General A. W. Weddell, Calcutta, July 2.

Italian Mills Prosperous.

The Italian cotton textile industry appears prosperous. Nearly all mills are running full time, and are reported to be selling their products at a profit. The mills are financially strong, and business has been good for some time. Cotton consumption for the current cotton year is estimated to have been greater than in any previous year, notwithstanding shorter labor hours and the production of somewhat finer counts of yarn in some sections. Exports of cotton manufactures during 1924 have been considerably larger than those of the previous year. On the basis of such shipments abroad thus far this year and the orders for future delivery, it is believed that exports of yarn and cloth will amount to fully 50 per cent of the total production of Italian



On

Spoolers — Winders — Warpers



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Lancashire vs. the Southern States

THE following comparison between cotton manufacturing conditions in England and Southern mills is reprinted from the Textile Recorder of Manchester, England:

It is not for me to preach to Lancashire; nevertheless, with an early training in her factories and technical schools, and after a continuous study of the industrial evolution of the County Palatine extending over a period of some 30 years, I may be permitted to set down a few observations which have recurred to me many a time during the last few years.

My contact has had the intimacy of a first-hand survey of the trade as a representative of the United States Government charged with the duty of investigating and reporting on it to the Department of Commerce. During the three decades I have kept in constant touch in the course of something like a score or more visits to Manchester, supplemented by the weekly and monthly perusal of the outstanding technical and commercial journals of Cottonopolis. I have met and talked with many leading Lancastrians who have visited the United States, and also spent the three weeks on that memorable special train which, in 1907, traversed the cotton belt and through the Middle West passed into Canada and thence back to New York. Before that I met and traveled a little with the Private Investigation Commission on its two visits, the first during the planting season and the second at picking time. I have built and managed spinning, weaving and thread mills in the North and the South, and I tell all this merely to justify the recording of a few thoughts that have persisted in coming up as the years have passed. Of late, with each succeeding year, the Lancashire cotton trade has seemed to have had burden after burden piled upon its shoulders, and one impediment after another placed in its path until it is now staggering under a heavy load which it must carry over a long and very rough road. This is not a prepared article. It is a record of scattered thoughts that come to me after reading a particularly vivid account of the bad state of trade on your side of the Atlantic, and another which depicts the woes of an American cotton mill man, though his present state is an envious one when compared with yours, and is sent to the editor expecting to be consigned to the waste paper basket. This American friend is banking upon an extension of his plant in the South to relieve his distress. And he cannot be persuaded that the paternalism, comparatively low taxation, easy labor laws and the long working hours ruling in that region are merely temporary advantages which may pass before his depreciation fund on the new venture amounts to any sum worth while. The leaven of labor unrest is working in the South, and the end is as inevitable as it is obvious, which is another story I may tell when leisure serves.

To come to the thought which arises from a conviction I have often expressed, that the main troubles of the American cotton growers are economic disorders, arising out of faulty methods of handling the fibre between field and shipboard, and that these will never be cured until concerted action is taken by the cotton-growing community.

I have likewise often wondered what tangible results there are to show for the many visits of inspection to America by the accredited and competent representatives of both masters and men from Lancashire. While here, every facility was afforded to inspect American mill machinery, equipment and methods.

It is clear, for instance, that over a long period capital costs per spindle average lower, much lower in fact, in England than here, also interest charges. Many a Southern cotton mill, cheek by jowl, so to speak, with the cotton fields, pays more for its raw material laid down in the mixing room than Lancashire does. Coal costs more here than with you. The overhead or on cost items, such as the expenses of every buying and selling transaction, are infinitely greater here than in England. Freight charges on yarn and cloth to market, on supplies to the mill, containers for packing goods—no empties returned—salaries, commissions and weekly wages are greatly in your favor. You can lay down goods in most foreign markets at a less carriage cost than many a Southern mill pays to send its yarn and cloth to New York or Boston. Your climate is a better one for both spinning and weaving than ours. It also costs you less to warm your factories in winter. It takes a dozen or so high-salaried salesmen, who have to travel over comparatively immense territories at high costs for railway and hotel bills, to sell as much yarn as one man will dispose of "on change" as part of his duties as mill manager. We pay twice as much to yarn and cloth agents as you do. And yet grey, bleached and printed goods of plain weave made in the United States often undersell Lancashire fabrics of like width and weight, but more heavily sized, in many foreign markets. Why is this possible when all your advantages are taken into account? If Lancashire does not know, it is her business to find out and then apply the remedy.

Why, while short time is on, do not employers and workers get together, send their ablest men over here and to every other country where cotton is spun and woven in competition, and try to discover every factor which enables others to take trade away from the County Palatine. If one reason lies in the use of the automatic loom, then say so and prove it. If it is a better system of labor distribution or dilution of skilled labor, bring that out and back it up with competent evidence. If better systems of management and financing are unearthed, describe them to your executive

directors and bankers, telling them that they must make the necessary readjustments. If too much restrictive legislation is at all responsible, then let Lancashire, Yorkshire, Leicester, Nottingham and Glasgow say to Westminster: "Knock off these shackles or we will set up some sort of effective Parliamentary obstruction that will force you to act, and by election activities send those members who obstruct and keep us living on doles into permanent political oblivion." Let the politicians of every party thoroughly understand that whoever stands in the way of the rehabilitation of England's textile trades is by so doing signing the warrant for his own political execution. These things have been done before both in England and America, just as many an old fossil before me has let his thoughts throw backward and run into the future, but not, in this instance I hope, aimlessly.

For, out of my experience, whether it is worth much or little, there has grown a settled conviction that Lancashire retains more inherent advantages as a cotton manufacturing center than any other yet developed elsewhere. I am convinced that she can, if she will, supply a greater portion of the heavy and plain goods to buying countries, and that, despite import tariffs she stands unrivalled as the purveyor of cotton cloths in which brains and experience outweigh the cost of the raw material. With an abundance of coal in the county, if a super-power system is indicated as a means of reducing the cost of production, then "go to it," as we say over here, and build great power houses at the pit mouth and distribute electric energy over wires to the factories. There is hardly a factory in the county which is not within the economical range of mine to mill electric power distribution. Save the by-products of coal for the dye and drug trades. You spent close on \$100,000,000 for a ship canal, and Liverpool was but some 30 miles distant from Manchester, with the East Coast ports not much further off. If Manchester needs a spot cotton market to make you competitively stronger, set one up. There is no factor nor combination of them yet in sight that can wrest Lancashire's supremacy away from her unless it be the human one; therefore, if her sons permit her lead to be lost it will serve them right. The operatives know perfectly well there is no other occupation so well paid open to them. They surely do not need to have the fact "rubbed in" that the alternative to the cotton mills and the allied trades dependent upon them is either casual labor and the doles that go with it in an already overcrowded market for workers of this sort, or emigration. The employers would fare little, if any, better. Neither class can prosper if the other suffers. The bread of each is cut from the same loaf.

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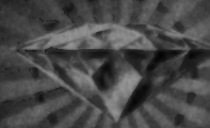
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Better Equipment for Warping

By a Representative of the T. C. Entwistle Co.

IT'S foolish to try to compete in the present state of the textile industry, with obsolete equipment, when the cost of new and better warping equipment is so small, as compared to the expense of trying to keep old machines producing and in repair that it is folly in the extreme to try.

Never in the history of the industry has it been so important for manufacturers to see to it that their machinery is the best and up-to-date in every detail.

The mill that is not so equipped is indeed badly handicapped. Much depends on proper warping to the ultimate success of the finished product, and much can be saved or lost in this department.

Consider the item of the speed that warpers should be run to get the best results when the yarn reaches the slasher and finally the loom.

Until very recently it has been the custom to warp from spools and packages, running the warper from 40 to 70 yards per minute. Now—with a new Entwistle High Speed Warper equipped with a creel built to handle cones containing sufficient yarn for two or three beams in place of one—a speed of 150 to 200 yards is easily maintained. In other words, at very small cost over the old style warper the same production is possible with a third less

labor, power, floor space and invested capital.

This is indeed "Better Equipment."

With the high speed warper as standard equipment is furnished the Entwistle Automatic Lint Cleaning Device, a late invention that prevents lint from collecting and causing lumps or heavy yarn; a neat and helpful device from the point of view of quality of yarn and economy of labor.

The Entwistle Stop Motion is another feature of importance in economic production also measuring device to prevent losses in pounds or yardage and to determine any desired cut lengths, etc.

Entwistle patented open box combs and positive expansion combs are worthy of special mention in better equipment; in fact, no line of warping equipment deserves or enjoys a better reputation today than the "Entwistle." Developed more than thirty years ago and immediately recognized as a distinct improvement over any of its predecessors, it has by the skill and knowledge or its force of trained outstanding features of its original experts not only maintained the product, but added from time to time many new features of importance to the cotton manufacturing industry. Today, it is the "last word" in better equipment. With it, you can surely win.

Warp Wind vs. Filling Wind On Spinning Frames

(Continued from Page 24)

the side of the spooler, and with a simple friction applied to the whirl of the spindles, is generally employed in other countries. It will be seen that by this method no difficulty may be experienced of the yarn scarfing, as run through a tension device, as no such tension is used, for the tension device is applied to the revolving spindle. Here the most tension required may be easily applied and a firm, hard spool wound. Also no kinks can be wound onto the spool. The objection to this method may be that there is considerable strain on the yarn each time that the end starts after the piecing or tying-up. The tension is not automatic but fixed. It presents an undue strain during the time of the yarn starting to wind after piecing.

The second method is that of drawing over the ends of the bobbins and here some sort of tension device between the supply and the spool to be wound is necessary. Various devices for this have been presented. The earlier types were unsatisfactory for one reason or another.

Spooling tensions today are to be had which are so nearly ideal as to give in combination with the filling kind a net result superior to the total result of the warp wound

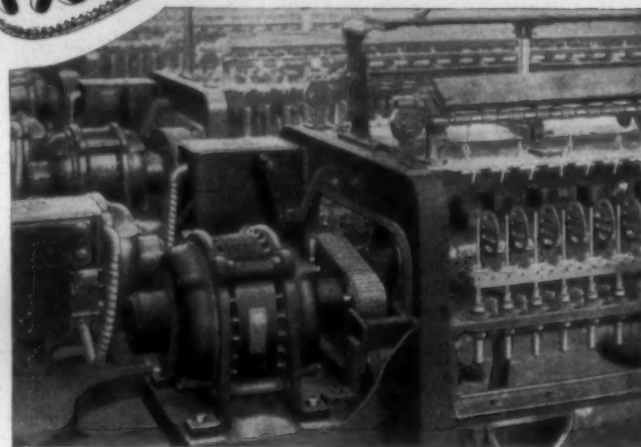
spinning package when winding from the bobbin holder.

Further consideration of the spooling and winding problem at once develops the question of spindle driven spool versus surface driven. The spindle driven spool has in its favor simplicity. The surface driven spool, or warper's cheese, has been studied and developed for some years with the result that many of the original complications have been eliminated. The surface driven wound package provides the advantage of uniform or constant speed of yarn from empty to full package. This uniform speed of yarn greatly assists in the use of any yarn tension device. Also a very much higher speed of yarn in winding is possible and this greatly reduces the cost of winding. Highly developed but simplified equipment for rewinding yarn from the spinner's bobbin into weaver's bobbins or onto warpers or cheeses may be procured today as was not possible a few years since.

Textile Workers in Netherlands.

The operatives in the cotton mills at Enschede on June 10 numbered 4,542, or about 42 per cent of the number employed in normal times. In addition to the men who have remained constantly at work it is estimated that 35 per cent of the operatives have returned to work since the lockout began.—Commercial Attache S. H. Cross, The Hague, June 15.

MORSE SILENT CHAIN DRIVES



7-1-2 H. P. Morse Silent Chain driving spinning frames in a southern mill. Driven 1750 R. P. M., driven 1250 R. P. M., centers 8-1-2 inches

Improves Yarn Quality

Morse Silent Chain Drives transmit 98.6% of the motor horsepower developed with constant and positive speed ratios. Improve the quality of the yarn by eliminating pulsating yarn at the traveler—a common cause of broken yarn when belts with their varying speeds are used. Morse Chains also prevent loss due to fly and dirt from pulleys and belts getting into the work. Cleaner yarn is produced and customers better satisfied.

Let Morse Engineers help you.

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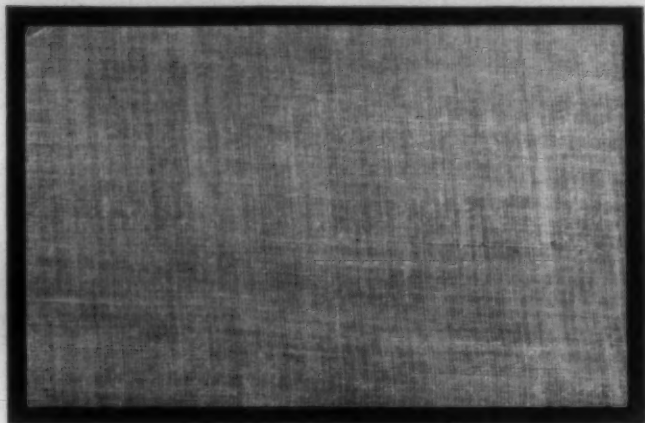


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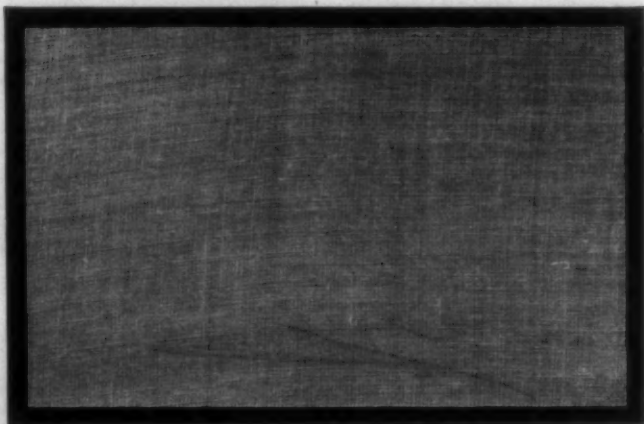
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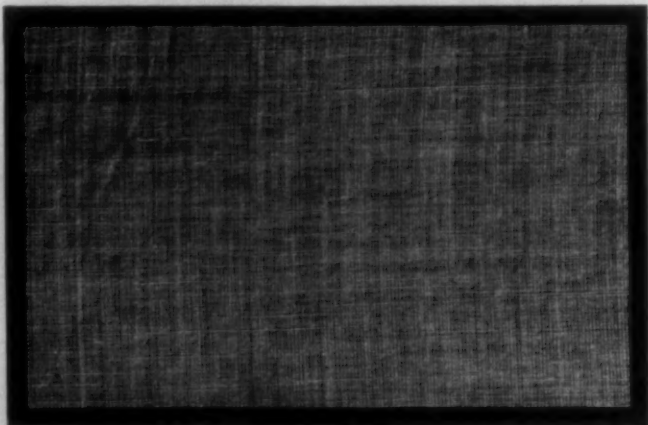
Sample No. 35.—Batiste.

Plain woven. Finished width, 46 inches.
97 ends and 94 picks per square inch, finished.
Warp yarn, 88s. Filling yarn, 124s.
Weight, 9.64 linear yards (12.32 square yards) per pound, finished.
Bleached and mercerized.



Sample No. 36.—Transparent Organdy.

Plain woven. Finished width, 52 inches.
91 ends and 85 picks per square inch, finished.
Warp yarn, 88s. Filling yarn, 128.
Weight, 9.23 linear yards (13.33 square yards) per pound, finished.
Bleached. Permanent organdy finish.



Sample No. 37.—Muslin.

Plain woven. Grey width, 40 inches.
100 ends and 85 picks per square inch, in the grey.
Warp yarn, 98s. Filling yarn, 132s.
Weight, 12 linear yards (13.33 square yards) per pound, in the grey.
Unbleached.

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⬠ Heddles are built on the principle that they "should be seen but **not** felt." If a warp thread was capable of sensation, it would scarcely get a tremor when passing through the frictionless eyes of these heddles.

It is this freedom from chafing that is responsible for the small amount of breakage ⬠ users experience. The eyes of the heddles are made velvety smooth by a patented soldering process. Consequently, the thread runs through without being weakened, or creating fly.

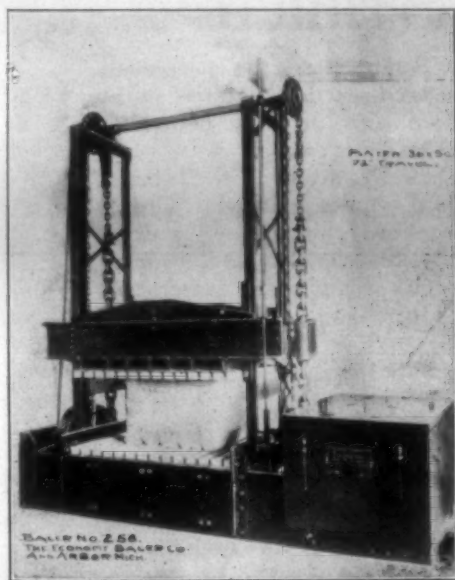
⬠ Heddles conserve weaving time and protect the quality of your woven goods. We shall gladly send samples.



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HEAVY DUTY NO. 258. PLATEN 50 x 36



This Economy Heavy Duty Cloth Press No. 258, has a platen 50 x 36 inches. Platen travel of 72 inches. Equipped complete with Direct Connected Electric Motor.

Press will develop tremendous pressure, ample for the baling for Export and Domestic shipment of Duck, Khaki, Osaburgs, Sheetings, Print Cloths, Tickings, Twills, Denims, Drills, Lawns and Shirtings or for compressing gingham. Requires only about one minute of actual motor operation to make a Bale of Cloth.

Press maintains its maximum pressure indefinitely, until released. Unlimited compressing platen stroke. In other words, platen will travel as low as is necessary to completely compress the bale, regardless of the third dimension, as the platen can go down to within four inches of compressing platform. Entirely self contained, requiring no cement foundation, pit,

over head counter-shafting, chain connections, etc.

Chains are hand forged Swedish steel. Will stand over 50 per cent over load, a greater load than can be exerted by the motor pulling up to 40 H. P. torque.

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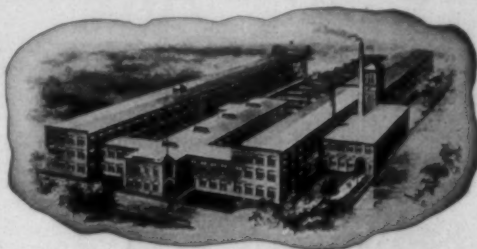
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Automatic Control of Temperature in the Dyehouse

IN ancient times the dyer gained some idea of the temperature of his dye liquors by putting his hand in the solutions. It is true that by long practice and personal experience in this method of ascertaining the temperature a seasoned dyer can frequently tell within a few degrees if the bath is over or under, let us say, 140 deg. Fah.

The need in other lines of industry for a closer indication of temperature, explains a writer in the Colour Trade Journal, led to the invention of the thermometer which, if properly constructed, is capable of accurately indicating temperatures over quite a wide range. These instruments have become the commonplaces of everyday life, and the more modern dyer has frequently adopted their use as a means of acquainting himself with a rather accurate knowledge of the temperatures of his various dye liquors and of the processes of treatment where heat is employed as an adjunct to other chemical or mechanical operations.

Though the dyer may at times be disinclined to fully acknowledge the entire truth of the statement, nevertheless temperature has a considerable influence on the various reactions taking place in the dyeing process. The dyeing of any fibre is really a chemical process in some form or other, and chemical processes are notorious for being dependent in a large degree on the factor of temperature. In the refinement of any art where rule of thumb and haphazard methods of control are operative, there is a tendency towards a standardization of the various factors entering into the process or operation, and this standardization requires, in the first place, a careful and accurate measurement of the factor in question, and secondly, an intelligent and reliable method of controlling the state and the limiting values of this factor.

In many dyehouses where science and chemists and engineers have penetrated with a ruthless disregard to the traditions and prejudices of antiquity, and where a desire has been manifested towards utilizing the instruments of precision that have been made available for the measurement of physical conditions, it has become the habit to install thermometers for the purpose of ascertaining the temperature of various baths and solutions. In many cases the devotion to science has even gone further than this, and as an aid in following up the temperature conditions and checking up the careless workman, temperature-recording instruments have been employed. These furnish on a chart of paper a curve which accurately describes the temperature in question over any given period of time, usually twenty-four hours or a week of seven days. These charts are sometimes removed from the recording instrument and are often filed away for future reference, especially if suitable clerical assistance is available whose business it

is to give their attention to these small details of plant operation.

It would seem that with the compilation of such records as are here made available in this manner the ne plus ultra of scientific control in the dyehouse had been reached, but we have frequently noticed that the dyer soon loses interest in these little charts. After the first flare of scientific enthusiasm has passed it has often been our experience that the charts in the temperature recorders are seldom touched. We have been in mills where these instruments have been studded around at various conspicuous points, and a feeling of pride and scientific rapprochement has swelled within us. We have immediately felt a brotherly interest arise; here at least is a dyer who understands and appreciates the instruments of science; he becomes our confrere, one of our associates; we elevate him to the chosen ranks of the intelligentsia. With a look of keen interest we gaze into the chart of the recorder with a feeling that this will tell the whole story—and behold, we find that the dust-covered chart is dated six months ago. Then we moralize on the utter futility of human ambitions.

Instruments are of little value unless they are used systematically. If temperatures in dyeing and finishing operations are important, it is logical, of course, to obtain instruments to tell the temperature. If operations in a mill are such that identical conditions are necessary in order to produce a uniform product, then it is important that the same temperatures be employed under like conditions, otherwise there will be a deviation in the identity of the process. Therefore it is logical to provide an instrument to record the temperature of such processes. We might employ a man to note the temperature each time and to write it down in a book, but a man is only human; he is liable to forget it; he may be doing something else at the time; there will certainly be lack of regularity, and a great deal will be taken for granted. There is nothing like an instrument for remembering to do the thing it is supposed to do—provided it is in working order and is running. We are agreed that the temperature-time factor is important, and the temperature recording instrument will furnish us with this factor provided it is maintained in working order and is running. The clock has to be wound up and the charts have to be supplied to it; the instrument cannot unfortunately do this for itself. If it is to be of service to the dyer he must see to it that it is on the job, like any other workman.

So far so good; but we have only reached the point of having the conditions of the temperature-time factor noted and recorded. Something more than this is needed; it is also necessary to have the right temperature at the right time. Suppose we are mordanting and dyeing a certain kind of goods to produce a certain character of color, and suppose it has been satisfactorily demonstrated that the best results

fastness of the color. It is important to obtain by starting the mordanting bath at 160 deg. Fah., raising the temperature to the boiling point within 45 minutes, and then maintaining the bath at that temperature for a period of one hour. If these conditions are materially varied there will be a variation in the penetration, the tone or the amount, therefore, that these conditions be always duplicated in order to get uniformity of results. If we rely on the human mind and hand to turn on the steam at the right time, to turn it on in sufficient quantity to heat the bath to the boil within 45 minutes, and then to keep it at the boil for one hour, the chances are that these conditions will be but poorly maintained and there will be wide variations. Any workman who has become so accurate and so attentive that he is able to keep these conditions up to a proper standard has become too valuable to be left at such a mechanical position; he should be given a better job.

This is where engineering science and skill has gone a step further and has provided us with an instrument to control the temperature-time factor at any condition or set of conditions that experience has shown to be proper and necessary. The control apparatus will see to it with invariable faithfulness that the valve is turned to the proper point at the proper time to heat the bath to the boil within 45 minutes and to maintain it at that temperature for an hour. If the temperature starts to fall when it should not, the control apparatus is on the job and will turn on more steam; if the bath is heating up too quickly, the control apparatus will turn off some of the steam, not ten or fifteen minutes late, but just at the right time. In other words, it will maintain at a constant point the conditions to which it has been adjusted. It will furnish the uniform conditions to produce uniform results. It is the workman always on the job, always watching to do the right thing at the right time.

This ability to standardize and maintain accuracy of conditions is a great help to the dyer and finisher, if he can be made to realize it. It relieves him of a considerable burden; he does not have to be thinking continually of the fixed details of his work, for the instrument will take care of all this in a much more accurate and faithful manner than he can himself. He will have more freedom to do those more intelligent things that instruments as yet have not been devised to accomplish.

Southern Exhibit Arouses Interest

The prospectus of the Southern Exposition to be held at the Grand Central Palace January 19 to 31 next, recently issued, has been followed by Bulletin No. 1, giving further information concerning the big event which will present to the country in tangible form the products and resources of the South.

On the first page of the bulletin

it is stated that the exposition is "the first attempt to bring together in a concentrated display the thousands of things that prove this section to be the land of commercial and agricultural opportunity. A great sectional show made possible by the chamber of commerce of the South. Endorsed by the Governors of the Southern States and by leading farmers, manufacturers, professional and business men. A great co-operative movement organized and conducted without profit to show what the South has done and is doing. The exhibits will include the products of the soil, factories, industries, mines; the means and materials for transportation and power; pictures and specimens of natural resources."

It is announced that the "Manufacturers Record" of Baltimore has offered a prize of \$5,000 in advertising to the State making the most comprehensive exhibit. Dr. Charles H. Herty, formerly president of the American Chemical Society, has consented to act as chairman of the committee on award. He will select the other members.

The exposition will open in the Grand Central Palace on Monday, January 19, and close on January 31. The different States which have contracted for space are urged to complete their organization within the next few days. It is desired if possible to make space allotment by July 15. Each State will be apportioned an equal amount of space. It is stated in the bulletin that there is reason to think that the following States will participate: West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas and Tennessee. Kentucky and Maryland are considering the invitation.

The president of each State society in New York will be asked to appoint an exposition committee, whose duties will be to promote the success of the enterprise in every possible way, chiefly in obtaining a large number of high class visitors from all over the United States. The committee will be asked to study the products of their old home communities and work out a nationwide publicity campaign. Through these Southern societies Colonel Holmes B. Springs, of Greenville, S. C., secretary of the exposition, will seek to interest many persons and corporations in attending the show here next winter.

Colonel Springs, who has a wide acquaintance in this city, will call upon the president of each State society and endeavor to arrange a luncheon for the day set apart for that State. The luncheon will be very informal. It will be in the nature of a reunion for each State, and after the repast and thirty minutes of speaking adjournment will be had to the Grand Central Palace.

The active officers are: President, William G. Serrine, Greenville, S. C.; vice-president, Col. Joseph Hyde Pratt, Asheville, N. C.; secretary, Col. Holmes B. Springs, Greenville, S. C.

Beautiful Towns Make Better People

We like to think of the time when every mill town will be beautiful; the mill walls vine-covered, with foundation plantings tying the buildings to the ground, and all in beautiful lawn settings. Graded streets lined with well cared for shade trees, and every home, even the most humble, improved by vines, shrubs, and roses.

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Have you ever stopped to consider what such an environment would produce? Unconsciously the dwellers of such towns are better; their lives are cleaner, they are healthier, happier, and do better work.

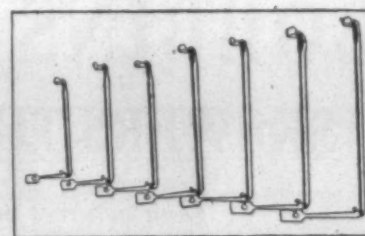
Stimulate better living in your town by improving the mill grounds and encourage your employees to beautify the home grounds. Our Landscape Department will be glad to give suggestions, make plans and show you how it can be done at moderate cost.

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Number Eighteen

(Continued from Page 18)

fact that the new frames usually have more spindles per frame naturally assists in reducing labor costs, and floor space. The new fly frames are also more substantially built, which means fewer break-downs and less loss of production.

The tape driven, wide gauge filling wind spinning gives more uniform twist, more even yarns, and a very much larger production per spindle. This of course reduces labor cost per pound and there are more pounds on which to realize a profit.

The greatest improvement coming under my observation recently was made by a mill on No. 9s warp, changing from warp to filling wind. They were running front rolls approximately 150 r.p.m., and after changing they got 178 r.p.m. I did not believe it was possible until I counted the speed myself with an up-to-date indicator. It was necessary, however, for them to change the style of their bobbins before they were able to attain this speed.

Of course, old spinning can be changed over to filling wind, but is more economical to have the frames come equipped with the proper builders. When changing over new warp bobbins should be bought, new builders must be bought, as well as tensions for the spoolers. When using the filling wind waste at the spoolers is almost entirely eliminated. It is the usual practice to run the spoolers very much faster when using the filling wind, and in this way it is possible to reduce labor cost, and by using fewer spoolers save power and supplies.

There are still quite a few mills handicapped by using old short bottom shank spindles, with excessive vibration and consequent bad running work. Since we have just recently replaced some of these with up-to-date spindles, I am speaking from experience when I say there is a vast difference between the two.

The new warpers with large fluted rolls, and with ball bearings on measuring rolls produce a much more uniform yardage on the section beams and reduces waste at slashers.

The many advantages of a modern circulating size system are so obvious it hardly seems necessary to point them out here.

As strange as it may seem, there are still thousands of old style plain looms being run in the United States today. The mill owners are paying for the automatic looms in the form of higher labor costs and reduced production, but they do not have the benefits to be derived from them in their mills. We are running both the old plain looms and shuttle changing automatics. On the same style of 36-inch setting it costs us 2.65 cents per pound for weaving on the plain looms and 1.79 cents on the automatics, and at the same time the weavers make more money on the latter type of loom. If we had hobbins change automatic looms the weavers could run four more

looms than they do on the shuttle change, and then the labor cost for weaving would be reduced to 1.32 cents per pound. We also get 10 per cent more production from the automatic looms, which makes a further reduction in total manufacturing cost per pound, as well as providing more pounds on which to realize a profit. The automatic loom saves floor space, since it does not require so many of them to weave a given production, which in itself is no small item in this time of high building costs.

A modern mill can and usually does provide for the transportation of its product from one department to the other in such a manner as to reduce labor cost.

The mill built today is better lighted both naturally and artificially than the older ones.

A modern humidifying system is one of the greatest advantages an up-to-date mill has over its less progressive competitor. Some of these systems make it actually possible to keep atmospheric conditions very nearly ideal for cotton manufacturing.

It is difficult to estimate just how much all of the above mentioned improvements would reduce the manufacturing cost. I believe that a mill running on average 22 yarns making brown sheetings would easily save 3½ cents per pound on total manufacturing cost, and were I not so conservative would say 4½ cents. Based on a production of 3,000,000 pounds per year there would be a profit of \$105,000 due to the improvements alone, which would go a long way towards paying for the necessary new equipment.

L. M. B.

Number Nineteen

Spooling and Warping.

There are several processes in cotton manufacturing that for some reason have not been given the attention by the mill men and the machinery builders that they deserve. It may be that many of us have considered two of these processes a place where the nature of the package is changed, and for that reason they have been passed by in the march forward to better methods. Some of us probably have thought of these processes as necessary evils. Spooling and warping are the places I have in mind, and they are so closely connected that we will discuss both of them in this article. True there have been minor changes in recent years; but there has been no material advancement until a few years ago when one of the machinery manufacturers introduced an automatic spooler and a high speed warper which were radical departures from old methods. It may be due to the fact that these machines are so different from what we knew spoolers and warpers to be that many mill men have been slow to try them out; but progressive manufacturers are rapidly coming to the place where they will adopt any machine that will give them better results with lower costs.

The automatic spooler winds off

of the end of the bobbin on both filling and warp built bobbins, and is wound onto a ball-bearing core which rests on a cylinder revolving at a surface speed of 1,200 yards per minute. This cylinder is placed almost directly above the bobbin, and in that way three very desirable results are obtained. All sharp angles are eliminated, and the tension due to the turning of the bobbin in case of warp wind and the tension device on filling wind are avoided. Every yard of yarn throughout the winding of the spool—or cheese, as this package is called—is wound at the same speed. How few of us realize that the tension on the yarn rapidly increases as the spool fills up when the old method is in use. A groove in the cylinder gives a criss-cross wind to the package, thus eliminating the necessity of wooden or metal heads, and gives a package which is easily untangled.

The thread passes between two saw-toothed members which can be set according to the quality of work desired and all slugs and gouts are taken out. These yarn cleaners are cleaned out after each bobbin is wound. The writer believes that this feature is far in advance of anything now on the market.

Every mill man knows the desirability of a good, uniform knot. Even with the hand knotter many knotter kinks get into the yarn, and each knotter may tie a different length knot. As long as the human element enters into the work, there will be more or less bad work and uneven work. This spooler ties the knot mechanically at a rate of 60 knots per minute, and every knot is tied the same and is free of kinks. The machine can be equipped with either a knotter that ties our familiar round knot or a knotter that ties a true weaver's knot. All weavers and knitters know the desirability of the small knot which can be gotten with the weaver's knot only. Twenty-five per cent of all loom stoppages are due to knotter kinks, bad knots, and good knots which catch in worn harness eyes, in the reed, or wear out adjacent threads as the shed changes in weaving. The advantage gained through a small knot increases as the threads per inch in the cloth increases, and an ordinary sized knot will not go through a small knitting needle at all.

In the old method of spooling, the full spools are usually thrown into a box, and very often the yarn on one spool is soiled or cut when another spool strikes it. In the equipment that goes with the automatic spoolers are holders which eliminate this trouble.

With the latest type of spools, skewers and steps the tension on each thread in the warpers is about one-half an ounce, and the tension on all of the threads is not the same. In the high speed warpers the thread is wound from a ball-bearing core, and the tension is uniformly one-eighth of an ounce. Ordinary warpers on medium counts of yarn should be run at a speed of about 60 yards per minute, and a warper tender can take care of from six to eight machines. One of the

high speed warpers can do the work of seven old type warpers and one operative can run two of them. Her work is not scattered, and she can give each warper closer attention. One test that covered the winding of 600 beams on each of the two types of warpers, there was an average of 52 stops per beam on the old warpers and only 10.4 stops per beam on the new type. This will give you some idea of the difference in yarn tension on the two types of machinery. All of these machines were in the same room and were running the same number of yarn from the same spinning room. Necessarily, this will give you fewer laps on the slashers and better running weaving. The uniform tension gives a smooth beam on which there are no slack ends at the slashers.

Direct Advantages.

Reduction in costs, of course, is the biggest saving these machines will give you. Over a period of many weeks when both types of machinery were given all the yarn they could handle, we found that the cost on the old method was 1.062 cents per pound and only .556 cents on the new machines. Over a period of two years, during which time the machines were not run to capacity on account of lack of yarn, we found that the cost on the old method was .997 cents and on the new method .614 cents. This was on a weekly capacity of 25,000 pounds of medium count yarn. There are two other mills that I know of that have reduced their costs by very nearly the same percentage.

In our mill, ten hands now do the work that was formerly done by twenty-one hands. In another mill, 21 operatives are doing the work that used to require forty-three. In these days of high priced houses, a big saving is made in village costs; and it might be well for us to look forward to the time help will be much scarcer than it is today.

We saved over 3,000 square feet of floor space, and this figure will hold true in most mills the same size. Floor space costs \$2.00 per square foot, and the upkeep on this space is figured at 4 per cent. This saving of floor space is particularly to mills that wish to expand but do not care to construct new buildings. I have in mind one mill in which they had greatly increased their spinning production, the card room capacity was sufficient, but there was no place for more looms. The spooling and warping room was at one end of the weave room, being separated from it by a wooden partition. An installation of the new type machinery would have saved enough space for 144 looms. Other mills have their problems along this line.

On account of fewer machines and cheeses (spools) being required, we found that we saved 7,500 pounds of yarn in process, and in that way reduced our inventory.

Last, but not least, are the advantages we gained in the weave room. A test was run on 52 looms, one-half of which were on old method warps and the other half on warps wound on the new type



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GENERAL EQUIPMENT COMPANY

Charlotte, N. C.

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ANNOUNCES

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To Atlantic City and Niagara Falls on special dates during July and August.

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SUNDAY EXCURSION FARES

From Charlotte and Monroe to Wilmington (Wrightsville Beach). Tickets on sale Saturday night, good returning Sunday night. Season May 31st to August 31st, 1924.

For further information call on nearest Seaboard Air Line Railway Ticket Agent, or address

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machines, and this test lasted two years and twenty weeks. The stops per loom each day on the old method warps were 6.53, while the new method warps showed only 4.88 stops per loom per day. This was a decrease in warp stops of 25 per cent in favor of the new method. Eighty per cent of this improvement was due fewer spooler kinks and better knots. Pick counters were attached to the looms, and it was found that the new method warps gave an increased production over the other warps of 1.27 per cent. Other tests have been conducted in other mills on yarns ranging from 8's to 29's and on cloth ranging from bagging to 80x80 print cloth which have given almost the same results. These advantages can always be realized upon by the mill management.

I feel that in closing this article that a word should be said about the mechanical service of these machines. Of course, they require somewhat closer attention than the old type machines demand. That is true of all machinery in which there are more mechanical operations. Any good section man or loom fixer can be taught to take care of these machines in a short time. Our man has been looking after our machines for over three years now, and they are running in first-class shape. They have now been running long enough to prove that they are mechanically constructed as well as any other type of cotton mill machinery, and the quality of their work continues to the high standard that was first established.

ROBERTSON.

Vulcanized Fibre Spools

(Continued from Page 14)

depreciation saved on your spooler spindles. This saving alone will pay the first cost of the fibre head spools should the first cost be three or four times greater than the wooden head spool and the saving thereafter each year will be an added profit to the mill during the life of the spool.

Wholesalers Discuss Conditions

IN the market service letter of the National Wholesale Dry Goods Association the probable effect of cotton upon clothes is discussed at length and many opinions are expressed by the members, some of which follow:

"The present cotton situation seems to favor a good-sized crop so far as indications go at this early date, and, in view of the fact that high-priced cotton in the past has curtailed the use of the staple, it seems reasonable to expect possible future market trend to be toward a lower price.

"Lower-priced cotton should stimulate the demand for cotton piece goods to such extent as the present curtailed demand has been attributable to that cause, bearing in mind, however, that many cotton goods priced below the parity of cotton have not sold freely in recent months. Where prices for piece goods have already discounted lower priced cotton, they may be held steady through a continued curtailment of production and the market eventually absorb a larger production as the price for the staple becomes stabilized.

"I do not regard the recent imports of foreign cotton goods as having had any marked influence on domestic conditions; a certain proportion would be imported under any condition, and the excess above that minimum has not been great enough to have the marked effect that some have attributed to it.

"The crop now in the making, if it exceeds present estimates, is likely to broaden the market for American piece goods, both domestic and export, while if the crop has a setback and proves a disappointment it will exert a restrictive influence."

"The cotton situation depends entirely upon the weather, and if we have good weather for the next six weeks we should have a very fair crop and lower prices. If we have poor growing weather, the opposite will be the case. I have no opinion on these matters. It is all guess-work.

"If we have lower cotton the price of goods will naturally go off, but, as the margin is so close today and the mills are curtailing and do not wish to increase except at a profit, I feel that any reduction in the price of cotton will not be followed by as great a reduction in the price of goods. When buying starts the end of August or September for spring, I believe the market will turn as it has done for the last two years.

"I believe that there are other factors that will have a great deal more influence on cotton piece goods during the next few months, of course excluding from consideration a total failure of the crop, but as you and most, if not all, of the members are cognizant of them, it seems to me unnecessary to mention them here."

"Of course, my remarks relate more particularly to staples. I do not feel competent to voice an opinion on novelties, or other goods which for any reason must be purchased several months ahead of a season to assure delivery when wanted, but take it for granted that it will be necessary for the jobber to assume reasonable risk on such fabrics if he would have them available when the retailer demand shall reach him."

"The present situation is so confused and the future so clouded that I would rather be excused from setting forth any opinions. I have purposely held no opinion, so as not to influence our day-to-day business. Our selling problem, as it comes up to us, has been handled strictly on its merits. Just at present any question to the industry

COBB COTTON CO.**Cotton**

Mississippi Delta Staple.
Our Specialty
Helena, Ark.

predicated on cotton is of necessity a wild guess.

"The consumer's reluctance to purchase merchandise completely overshadows foreign importations. While there have been considerable importations which have, of course, directly or indirectly affected the domestic mills, I do not believe that the question has been or is an important one for us to consider."

"I think the average buyer knows as much about the situation and can guess equally as well as regards the future as any of the commission house people here in New York, and I believe that when the buyers arrive here, their actions as regards purchases will depend wholly upon the conditions existing in their various localities, and their personal views of the future."

"I believe that any opinions that anyone gives as regards the future would be purely guess-work. I am sorry I cannot help you out more in line with your request."

"The crop is still in the making, and all depends on the weather for the next sixty days. While the possibilities of making a good-sized crop are very much better than they were thirty days ago, this does not mean that it is assured by any means. If good weather continues, cotton quotations would naturally sink gradually lower, but evidently the price is already low enough to begin to attract some mill buying on the scale down, and consequently we are inclined to think any wide open break decidedly unlikely."

"Goods have sold for six months at prices much below replacement value. On what basis goods will sell, should cotton once more climb up in the 30's, we will not attempt to say, but on a basis of 25 cents or under, we are satisfied that goods can again be sold with at least modest profit. We expect to see prices adjust themselves to the cotton market by the time a definite line on the crop is possible, and we want to call attention to the fact that if that adjustment was made today, in spite of the recent decline to be advanced all through the list."

"We do not expect the competition of foreign fine yarn cotton to be so severe during the coming year. Last season, we think the English manufacturer had decidedly the better of the American in the matter of cotton, with the prospect of more ample cotton supply. We doubt if it is repeated."

"Should we raise an adequate supply of cotton this year, the consumer will no longer have the fear

that he is buying at prices based on insufficient supply of raw material. If we could have 22 cents or 25 cents cotton this coming fall, we are satisfied that we would see a more general and extensive movement of cotton goods than for several years."

Southern Mills Reduce Underwear Prices

Buyers have won their war for lower heavyweight underwear prices. The primary market's resistance to the pressure for reductions gave way when it became a matter of market-wide knowledge that the P. H. Hanes Knitting Company, of Winston-Salem, N. C., one of the main Southern producers, had revised quotations downward. The move was followed by the Mayo Sales Corporation, of New York, which distributes the product of the big Washington Mills, of Mayodan, N. C. Before the end of the day other mill representatives, selling agents and commission houses were preparing to fall in line.

The Hanes revision was made Thursday, but did not become generally known until recently. The new basis is as follows:

Ten-pound shirts and drawers, \$7.25 (from \$7.75); 14-pound suits, \$12.05 (from \$13.50); 16-pound suits, \$13.25 (from \$14.50); boys' 9½-pound suits, \$5.50 on size 20, rise 50 cents (from \$6). The new prices are said to be retroactive to June 1, freight paid, 2 per cent 10 days, net 70.

Prices on the heavyweight underwear for next fall, which were established last January, held firm until now through a prolonged siege of buying inaction. Sales at the openings were disappointing to mills, and up until the present week there had been little purchasing for fall. It is estimated that between 40 and 50 per cent of the public's fall underwear requirements may still remain to be purchased by jobbers.

No cause for the decline was stated, but it has been no secret that Southern, as well as Northern mills, needed business.

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Reserve Board Reports Dull Business

Washington, D. C.—Light demand for textile products during May and June, prices unchanged or lower, and curtailment in some industries to the lowest levels since early 1921, are reflected in a general summary of the textile industry, contained in the July Federal Reserve Bulletin, made public here.

Textile buying, according to the bulletin, has been largely limited to small orders to cover current needs, and in some branches price reductions have brought an increase in cancellations. Mill consumption of cotton in the principal cotton manufacturing States during May, the summary says, showed declines within the last 18 months, ranging from around 25 per cent in the South to nearly 60 per cent in New England, and averaging about 34 per cent for the country.

Employment in the industry continued to decline, and was lower than at any time since the 1921 strike. The price decline in cotton goods was checked during May, and the Fairchild weekly cotton goods index, which fell continuously from the first of January until late in March, has remained fairly steady for several weeks at about the low point reached last August.

The Fairchild index of yarn prices, however, although steady in May, fell rather sharply during June. Cotton finishers reported declines in business during May but billings, orders, and shipments were somewhat above those for July, the low month of last year and finished stocks have been materially reduced since that time.

Buying of the new wool clip in the West progressed during May and June, and although some resistance on the part of the growers to the prices offered was reported, a large percentage of the clip has been contracted for at prices below those paid last year.

"Sharp curtailment was noted in woolen and worsted spinning," says the summary, "during May. Mill consumption of raw wool was 18 per cent less than in April. Activity of worsted spindles, and of combs, was further reduced and the percentage active both as to number and as to the hours of operation, was less than in any month since early in 1921. Demand for woolen and worsted yarns and fabrics has been light and some price concessions have been reported.

"Clothing manufacturers report that business is slack and that pro-

duction has been considerably reduced. Unemployment in the clothing industry was further increased during May.

"Poor demand, falling prices, and curtailed production continue to characterize the markets for raw silk and its products. Buyers of thrown silk and silk fabrics have also been poor and prices have been lowered.

"Knit goods markets are dull, and buying is limited to current needs. Substantial reductions have been made in hosiery prices, but underwear producers have announced no changes. Operations have been reduced by underwear manufacturers, and May production was less than for April.

May Exports of Cotton Duck

Washington, D. C.—Domestic exports of cotton knit goods, during the month of May, including gloves, hosiery, underwear, sweaters, shawls and other knit underwear, has a total value of \$1,039,917, according to figures made public by the Department of Commerce.

Of the total amount exported, there were 3,499 dozen pairs of gloves, valued at \$7,032; 434,111 pairs of hosiery, valued at \$813,698; 63,692 dozen suits of underwear, valued at \$205,498, and 7,835 pounds of sweaters, shawls and other knit underwear, at a value of \$13,689.

Cuba led in the purchase of gloves, buying 920 dozen pairs, costing \$2,065; while Canada was second, with purchases of 930 dozen pairs amounting to \$1,584.

Cuba also led in the purchase of hosiery, buying 93,111 dozen pairs at \$169,021, and England was next in line, with purchases of 74,387 dozen pairs amounting to \$100,150.

England was the heaviest purchaser of underwear, taking 4,252 dozen suits at a value of \$24,475. Australia was second, buying 9,691 dozen suits amounting to \$20,129.

Mexico made the heaviest purchase of sweaters, shawls and other knit underwear, buying 1,498 pounds amounting to \$3,436. The Philippine Islands ranked second, purchasing 2,253 pounds, costing \$3,163.

Less Raw Silk Exported From Shanghai to United States.

Declared exports of raw silk to the United States from Shanghai declined from \$5,024,273 for the first quarter of 1923 to \$2,878,335 during the first three months of 1924, and those of wild silk decreased from \$2,156,829 to \$412,525.—Consul General Edwin S. Cunningham, Shanghai, China.

New Textile Mill at Caracas.

A new textile mill is being established in Caracas, Venezuela. The domestic industry will have an advantage over foreign competition, according to the local press, in that it will be able to cater to native preferences, and put goods fresh from the factory on the market.—F. C. Chabot, charge d'affaires ad interim, Caracas.

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Leisure and Health

It was Balzac who said, "To loaf is a science; to loaf is to live!"

This philosopher had in mind an ideal use of leisure. By "loafing" he doubtless meant a physical and mental state, not associated with what is ponderously termed "gainful occupation;" a state of pleasing adjustment with things around us, a state of easy relaxation of mind and body, but not a vacant-minded, sluggardly, lobsterish or dumb-bell phase of existence. A really artistic and perfect loafer is, in fact, in tune with the infinite. Leisure is often confusable with mere aimless, crude loafing. True leisure is a phase of life not concerned with money-getting or bread-winning but with release of the play instincts, the emotions, the imagination, and the spiritual resources of our being.

Misdirected leisure is often the result of ignorance, of low ideals of living. Heredity and environment and training have much to do with the filling of leisure hours. Guidance in directing leisure to the ends of health and happiness is much needed, but we must not too hastily blame those who squander the precious leisure hours. Physical deficiencies, infections and poisons, often direct the mind toward destructive and evil forms of leisure. Be sure that there is no factor of this kind at work before you condemn an individual for his apparently low standards of living, his crude methods of loafing, his apathy or lack of ambition, his dissatisfaction with his work.

The average healthy person is more adaptable than he is given credit for being. We have met highly successful business men who keenly regretted that they had not studied medicine. We know highly successful physicians who would unquestionably be leaders in any field of human activity. Circumstances, environment, and accidental impulses have much to do with the fixing of a vocation.

We cannot, therefore, rely wholly upon the adjustment of hours of labor, vocational selection or adaptation, or recreational facilities for establishing a balance in living. The most abundant means of filling leisure hours in a wholesome way will not inevitably correct the imbalance in a life that is handicapped by a poisoned or infected body. Again we must emphasize the need for a balanced health program if a balanced state of health and mind and body is to be attained.

Many will answer these warnings with the assertion that they concern only a few sick people and not the mass of the population. The contrary is true. Physical defects, infections and toxemias which need to be corrected are the common lot and must be corrected if a program of leisure is to have its full effect. Just as there are physically defective children who cannot eat even an ideal diet, so there are people with correctible physical defects who cannot enter into normal joys of living, however abundant the facilities provided. Education in leisure and organization of facilities

for constructive leisure are important phases of modern hygiene; but there must be combined with them other equally important measures and corrective human miseries.

Having uttered these warnings, we heartily commend the following "Fundamentals in Community Recreation" sent out by the Playground and Recreation Association of America:

It is the privilege of community-minded men and women everywhere to work to restore and preserve for all the people of America and especially for children their right to play and happiness.

1. That in nearly every community with a population of 8,000 or more there is need of a man or a woman who shall give full time to thinking, planning and working for the best possible use of the leisure hours of men, women and children.

2. That community leisure time programs should continue throughout the entire twelve months of the year.

3. That it is the responsibility of the entire community to maintain recreation opportunity for all the citizens and that there ought, therefore, to be, as early as possible, support of the recreation program through public taxation under some department of the local government.

4. That there should be in every State a home rule bill which will permit the people of any city or town to make provision under their local government for the administration of their community recreation.

5. That there is need in every community even though the municipal recreation administrative body be most effective, for private organization of citizens in their neighborhoods to make the fullest use of the facilities provided, to make sure that what is being done is meeting the deeper needs of the people of the neighborhood.

6. That the emphasis ought to be not only on maintaining certain activities on playgrounds and in recreation centers but also and definitely on the training of the entire people in leisure time activities, so that within the home, in the church and throughout all natural, human relationships there shall be the best opportunity for wholesome good times.

7. That the purpose in training children and young people in the right use of leisure ought not to be merely to fill up the idle hours but also to create an active, energetic, happy citizenship.

8. That even though the beginning of a city or town recreation program be children's playgrounds, other features ought to be added progressively from year to year until music, dramatic activities and discussion of public questions, training for more intellectual uses of spare time, and other valuable activities have been included, so that all ages and all kinds of people may find vital interest.

9. That every boy and every girl in America ought to be trained to know well a certain limited number of games for use outdoors and in-

(Continued on Page 47)

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Cotton Goods

New York.—Cotton goods markets stiffened toward the latter part of the week due to the sharp rise in cotton. Inquiries were more numerous and the general demand for print cloths and sheetings showed improvement. Many converters placed business on samples of specialties that they have been working on for some time. On print cloths, the best demand was for odd widths and styles, chiefly in the wide numbers over 32 inches. Market reports indicated that several Southern mills were taking business on these goods that had previously been going to Eastern mills. The price list was stronger and quotations showed some advance. While there were a few sales of 64x60s, only very limited quantities were available at this price and some mills declined business at figures slightly above this level.

Business in sheetings was not as large as print cloths, but prices were very steady. Some of the transactions reported were as follows:

36-inch, 5.00 yard, 8%, net, quoted; 8%, net, asked for 31-inch, 5.00 yard, with some goods at 1/8 less again reported. For 4.70 yard, 9%, net, is quoted; 10%, net, for 56x60, 4.00 yard; 10%, net, quoted for 37-inch, 48 squares, 4.00 yard, with reports of some in second hands at 1/8 less. Other prices generally were reported unchanged, 14, net, for 40-inch, 2.85 yard, with several makes being held for more money; 11%, net, for 40-inch, 3.60 yard; 10 1/2, net, for 40-inch, 3.75 yard; 9 1/2 to %, net, for 40-inch, 4.25 yard.

Some 64x60 pajama checks sold at 6 3/4 cents, and some spots of 72x80s sold in a small way at 7/8. There had been further reports of contract 72x80s at 7/8.

Considerable business is now being placed on fancies of various descriptions in cotton and silks and all cottons for the converting trade. The goods are of special construction, and orders that have been deferred for some time after samples were approved are now being placed in a moderate way.

In sheet and pillow case departments there has been an increasing number of buyers noted. They have not enlarged their trading operations, though with more buyers on hand aggregate business has been better.

Tire fabrics continued without feature with prices held nominal because of lack of trading interest. Tire companies have in some instances deferred the delivery of fabric poundage on cost plus and new contracts. Stocks of balloon tires are being only moderately consumed, though plans call for some of the new car models featuring the type. Square woven were last quoted 51 cents and 52 cents and cords 52 cents and 53 cents, with some asking 55 cents to 57 cents.

A few orders were recently booked for hose and belting duck. Reports told of a better demand for wide duck with one or two good sized orders going through. There was some price changing in one mill quarter, the announcement of which will be issued today. A price on 51 1/2-inch 135-yard double filling enameled duck was quoted 43 cents a pound in one second hand quarter. Mills held for 46 cents a pound, or 34 cents a yard.

Cotton goods prices were quoted as follows:

Print cloths, 27-in., 64x60s	6%
Gray goods (38 1/2-in., 64x64s)	9%
Gray goods, 39-in., 68x72s	9%
Gray goods, 39-in., 80x80s	13
Brown sheetings, 3-yard	14%
Brown sheetings, 4-yard	11%
Brown sheetings, stand	15%
Ticking, 8-ounce	26
Denims	24 1/2
Staple gingham	15
Kid finished cambrics	9 a10
Dress gingham	18 1/2 a21

Chinese Demand New Designs in Printed Goods.

The cut of Chinese clothing varies but little from year to year. Changes in design and color, however, are taking place with increasing frequency, particularly in printed goods for the better classes. Merchants must keep abreast of these changes, and, in order to do so, one British firm has established an art department in Shanghai. Designs are made up in color and orders taken from Chinese dealers for minimum quantities. Care must be exercised in guarding new designs so that they cannot be copied in cheaper materials and delivered before the original expensive and exclusive articles are put on the market.—Trade Commissioner G. C. Howard, Shanghai.

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The Yarn Market

Philadelphia, Pa.—The yarn market showed little change during the week. Somewhat higher cotton prices failed to stimulate interest and quotations generally were unchanged. There was little buying beyond scattered small-lot trading. The price list showed a great deal of irregularity and it is very hard to quote figures that represent actual conditions.

Stocks are growing smaller as a result of widespread curtailment and the fact that practically all purchases have been supplied from stock. It is felt that quotations will recover the loss brought about at the time of the Government cotton report should the cotton market continue as strong as it was during the latter part of the week.

Buyers showed slightly more interest in the market on Friday and Saturday, there being some inquiries in the market covering supplies for future delivery. There seems to be a general expectation among both buyers and sellers that conditions will begin to show real improvement within a few more weeks.

Spinners are inclined to act very cautiously under present conditions. For some time yarns have been selling on a basis of 25-cent cotton for October and now that October is quoted at that price, spinners are not inclined toward booking business on this price basis. They feel that an increase in demand would allow them a better margin.

One or two knitters have recently expressed the view that they intend to cover their season's yarn requirements at present prices, as they are confident of the future trend of the market. However, they are going to find it difficult to find yarn spinners who are willing to sell any large amount of future business at this time.

Quotations below were considered to reflect this market but vary considerably from prices quoted by many mills:

Two-Ply Chain Warps.					
2-ply 8s.....	41	a41½	2-ply 24s..... 46	a46½	
10s.....	42	a	2-ply 26s..... 47½	a	
12s to 14s.....	42½	a43	2-ply 30s..... 48½	a	
2-ply 16s.....	43½	a	2-ply 40s..... 56½	a57	
2-ply 20s.....	44	a	2-ply 50s..... 65½	a66	
Two-Ply Skeins.					
8s.....	39½	a40	40s.....	54	a54½
10s to 12s.....	41	a41½	40s ex.....	58½	a59
14s.....	42½	a	50s.....	65½	a66
16s.....	43	a	60s.....	72½	a
20s.....	43½	a	Tinged Carpet—		
24s.....	46	a	3 and 4-ply.....		a34½
26s.....	46½	a	White Carpet—		
30s.....	48	a48½	3 and 4-ply.....		a37½
36s.....	54½	a			
Part Waste Insulated Yarn.					
6s, 1-ply.....	33½	a	12s, 2-ply.....	37	a37½
8s, 2, 3 and.....			20s, 2-ply.....	41½	a
4-ply.....	33½	a	26s, 2-ply.....	46	a
10s, 1-ply and.....			30s, 2-ply.....	47½	a
2-ply.....	36	a			

Duck Yarns.			
8s.....	39½ a	16s.....	42½ a
10s.....	40½ a	20s.....	43½ a
12s.....	41½ a		
Single Chain Warps.			
10s.....	42 a	24s.....	46½ a
12s.....	42½ a	26s.....	47½ a
14s.....	43 a	30s.....	48½ a49
16s.....	43½ a	40s.....	56½ a57
20s.....	44 a		
Single Skeins.			
6s to 8s.....	39½ a	20s.....	43½ a
10s.....	40½ a	24s.....	46½ a
12s.....	41½ a	26s.....	47½ a
14s.....	42½ a	30s.....	48½ a
16s.....	43 a		
Frame Cones.			
8s.....	40 a	22s.....	43½ a
10s.....	40½ a	24s.....	44 a
12s.....	41 a	26s.....	44½ a
14s.....	41½ a	28s.....	45½ a
16s.....	42 a	30s.....	47½ a48
18s.....	42½ a	30s tying in	46½ a
20s.....	43 a	40s.....	57½ a
Combed Peeler Skeins, Etc.			
2-ply 16s.....	53 a55	2-ply 50s.....	69 a72
2-ply 20s.....	55 a57	2-ply 60s.....	75 a80
2-ply 30s.....	58 a60	2-ply 70s.....	85 a90
2-ply 36s.....	59 a60	2-ply 80s.....	95 a1 00
2-ply 40s.....	60 a65		
Combed Peeler Cones.			
10s.....	50 a51	30s.....	63 a65
12s.....	51 a52	32s.....	63 a65
14s.....	52 a53	34s.....	65 a67
16s.....	53 a54	36s.....	68 a69
18s.....	54 a55	38s.....	69 a70
20s.....	55 a	40s.....	70 a72
22s.....	55 a56	50s.....	75 a78
24s.....	56 a56½	60s.....	80 a85
26s.....	56½ a57	70s.....	90 a95
28s.....	57 a58	80s.....	1 00a1 05
Carded Peeler Thread Twist Skeins.			
20s, 2-ply.....	50 a	36s, 2-ply.....	60 a
22s, 2-ply.....	51 a	40s, 2-ply.....	59 a
24s, 2-ply.....	52 a	45s, 2-ply.....	69 a
30s, 2-ply.....	55 a	50s, 2-ply.....	73 a

Chinese Cotton Industry Has Deteriorated.

Washington, D. C.—The cotton mill industry in China deteriorated to such an extent in 1923 that there was practically no business in cotton textile machinery during the year, while the supply business in connection with this big industry has been very largely diminished, reports to the Department of Commerce state. With the number of mills now closed down, there are small prospects of a revival in this line for some time to come.

The old financial methods of the Chinese bankers do not in any sense lend themselves to the support of cotton enterprises. The poor manner in which the mills are managed has diminished the confidence of foreign banks. Little working capital has been available, and the interest rates have been too high for profitable production. Interest on loans to cotton mill owners has been as high as 16 per cent.

The rise in cotton prices during the last months of 1923, with the proportionate rise in yarn, placed the cotton mills of Shanghai in a position where they cannot run at a profit. This caused a shutdown in a large number of mills. The present outlook does not offer any hope of a revival of this industry, at least as far as Chinese managed mills are concerned.

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1	2 3/16 "	15 " 7 "
1	2 7/16 "	19 " 7 "
1	2 11/16 "	9 " 0 "
1	2 7/16 "	20 " 0 "
1	1 15/16 "	6 " 6 "
1	2 5/16 "	8 " 10 "
1	2 11/16 "	8 " 8 "
2	1 15/16 "	6 " 6 "
1	1 15/16 "	6 " 3 "
1	2 7/16 "	11 " 4 "
1	2 15/16 "	10 " 0 "
1	2 3/16 "	18 " 0 "
1	1 15/16 "	15 " 0 "
1	2 7/16 "	6 " 11 "
1	2 15/16 "	10 " 6 "
1	2 7/16 "	10 " 0 "
1	2 7/16 "	10 " 6 "
1	2 7/16 "	6 " 2 "
1	3 3/16 "	13 " 7 "
1	3 3/16 "	5 " 9 "
1	2 15/16 "	9 " 6 "
1	2 7/16 "	10 " 3 "
1	2 7/16 "	10 " 0 "
1	2 7/16 "	20 " 0 "
1	2 3/16 "	10 " 6 "
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Leisure and Health

(Continued from Page 43)

doors, so that there will never be occasion for any boy or any girl to say that he cannot think of anything to do.

10. That most boys and girls should be taught a few simple songs, so that, if they wish, they may sing as they work or play.

11. That all employed boys and girls should have opportunity in their free hours to enjoy companionship and wholesome social life.

12. That through the community recreation program every boy and girl should come to appreciate the beautiful in life.

13. That adults, through music, drama, games, athletics, social activities, community and special day celebrations, should find in their common interests the opportunity for a common community service.

14. That every new school built ought to have a certain minimum amount of space around it provided for the play of the children.

15. That nearly every new school building ought to have an auditorium preferably on the ground floor and should be so constructed that it is suited for community uses.

16. That if a suitable meeting place for community groups is not available in the schools or elsewhere, a community building should be provided through community effort.

17. That each child, under ten years of age, living in a city or town should be given an opportunity to play upon a public playground without going more than one-quarter mile from home.

18. That every community should provide space in sufficient area for the boys of the community to play baseball and football.

19. That every community should provide opportunity for the boys and girls to swim in summer and, as far as possible, to skate and coast in winter.

20. That every boy and every girl ought to have opportunity, either on his own home grounds or on land provided by the municipality, to have a small garden where he may watch the growth of plants, springing up from seeds which he has planted.

21. That in new real estate developments of five acres or more, not less than one-tenth of the space should be set aside to be used for play just as part of the land is set aside for streets.

At a recent meeting of the National Institute of Social Sciences there was a discussion of the right use of leisure, in which Dr. Thorndike, Dr. Salmon and Mr. Arthur Pound presented the scientific basis for the right use of leisure. Mr. John H. Finley has well summarized these principles as follows:

1. That leisure is an opportunity to recreate energy and build up mental and physical health.

2. That this is essential to happiness whether working or playing.

3. That most people do not appreciate the value of physical activity.

4. That not enough foresight and planning are given to our leisure.

5. That individual leisure time

activities should be chosen that will benefit the community as well as give pleasure to the individual.

6. That "fantasy" is a rich possession of the human race because we escape the burdens of life. We enjoy in fantasy the things we do not possess in fact. Leisure offers the same kind of escape from the cares of our complex civilization.

7. That our present industrial system with the deadening influence of the automatic machine makes the right use of leisure of tremendous importance to preserving an enlightened citizenship.

It is not at all uncommon in the work of the Institute to find instances of health failure and life failure largely due to faulty adjustment to environment. But usually there is a vicious circle—a combination of psychic and physical factors. A safety-first principle is to go carefully over the mind and body and life of the individual, to seek for the intrinsic and extrinsic factors at work, and not take the risk of a one-track road to health.

The life extension movement is often misinterpreted as an effort toward mere prolongation of life without regard to its quality. On the contrary, those in the life extension movement are chiefly interested in improving the quality of human life and in increasing the capacity of the individual for happiness and satisfaction in living. The real slogan is: "That they may have life and have it more abundantly."

German Imports of Textile Raw Materials Reported.

The total value of the textile raw material imports into Germany during the first quarter of 1924 is estimated by the Federal Statistical Bureau at 590,000,000 gold marks (gold mark equals \$0.2355), of which 440,000,000 represent unprepared and 150,000,000 prepared raw materials. An increase is shown in each case in the March figures, when compared with those of January, but in some instances the imports for February mark the high level of the period. During March, 229,051 quintals (1 quintal equals 220.46 pounds) of cotton and linters were imported, compared with 166,572 in January and 295,886 in February.

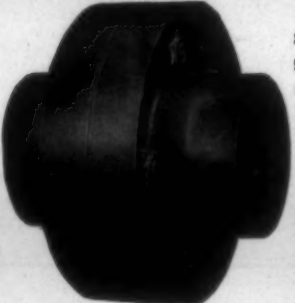
Irish Linen Industry Shows Marked Progress.

Conditions in the Irish linen market have steadily improved during the past few months. Practically every line is enjoying increased orders, and many mills, especially those producing dress linens, are booked to capacity for months ahead. As a result prices for finished goods are rising. Raw-flax prices, too, have been affected, and, since the supply is limited, it is entirely probable that the industry will be compelled to measure its output by the amount of flax available. Irish flax has registered a 50 per cent increase in price since the first of the year, and all indications point to still higher quotations.—Consul Henry P. Starrett, Belfast.

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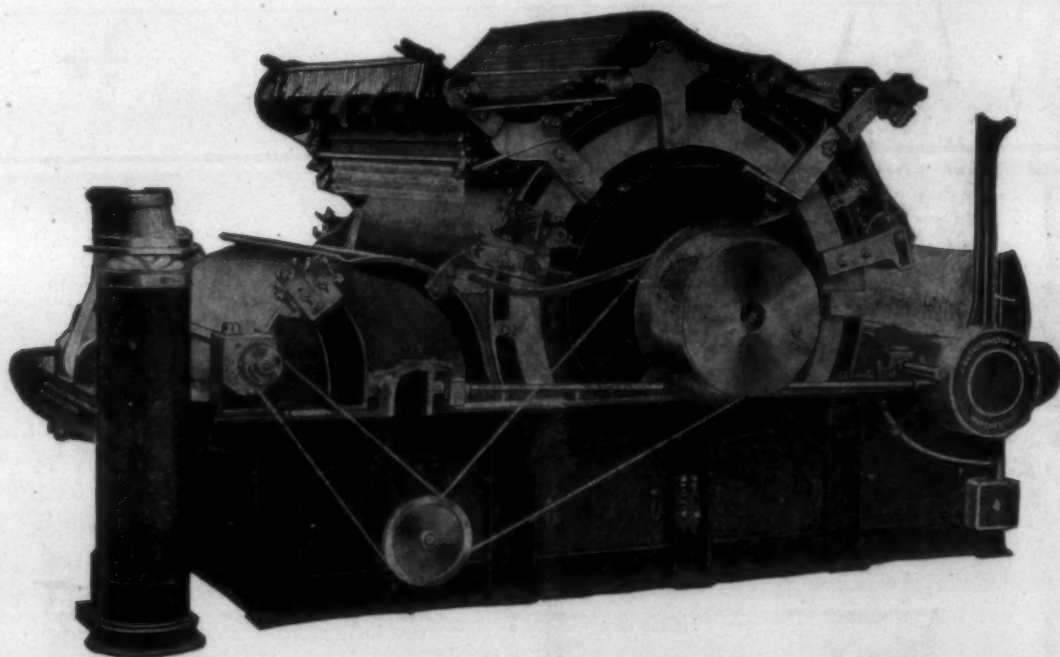
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